

KNOWLEDGE FREEDOM AND LANGUAGE

D.P. Chattopadhyaya

The concepts used in the title, *Knowledge Freedom and Language*, have been explicated and interrelated in the book. That scientific realism is not inconsistent with, or restrictive of, human knowledge and creativity—aesthetic and ethical—has been persuasively argued here. D.P. Chattopadhyaya has tried to show, among other things, that the currently influential abstract epistemology needs to be brought closer not only to science but also to arts and society and thus “demythologised”. In the process he uses the case and character of language in a sustained manner. Both in its abstract and concrete uses, language articulates and shapes human freedom and knowledge. Rightly understood *knowledge, freedom and language* interweave one and the same fabric of life which is practically endless, endlessly self-repairing and self-refining.

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An Interwoven Fabric of
Man, Time and World

D.P. CHATTOPADHYAYA

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For
SUPRIYA, DEBIBRATA
and
SOHINI

Preface

THE ESSAYS in this book, except those covered by chapters 4 and 5, have been written during the last nine years or so. The basic three themes of the work may be gathered from its title, *Knowledge Freedom and Language*. The reader is likely to feel that my main interest is the *human* factor underlying the different forms of knowledge and action. What I call the “human factor” is clearly manifest in two basic traits of our nature, viz., language-use and freedom-seeking. Our freedom-seeking, like linguistic in-dwelling, is often inarticulate, even unconscious, and not externalised.

When the human factor and its main features are systematically ignored and underrated in the name of realism and objectivity, our enterprises and achievements, from scientific-epistemic to artistic-ethical, appear more or less unrelated to the complexity and variability of life as we live it. For example, a sense of history is an inalienable sign of our lived life. In the name of searching for rationality of science or intelligibility of history we are often asked by metaphysical realists to postulate some immutable categories or abstract universals. Otherwise, they fear, the web of human thoughts and actions would prove too complex to be neatly portrayed.

Without denouncing traditional metaphysics, I shall try to show how, rightly understood, it stands closely related to scientific inquiry and history of science. My approach to knowledge, both natural and social, is in the main diachronic or historical. Yet, I am not a fluxist as the term is ordinarily taken to be. What I am opposed to is the static “system-building” efforts to bring together formal and material elements of knowledge in some very smooth, harmonious or aprioristic way, ignoring their growing or historical character. By “the Cunning of Reason” Hegel gets understandably disturbed but what seems more distressing is Kant’s utter inappreciation with it.

The static claim of knowledge and structural fixity of language can hardly be sustained without diluting the importance of human freedom. In this connection, I would try to explore the bearing of the human factor on the ways language is influentially and intimately related to all the pursuits and articulations of the praxiological and the epistemic objects of our life. In the process I may rightly appear very critical of some basic ideas or classical rationalists like Plato, Descartes, Leibniz and even Kant. I shall be defending what I have called elsewhere anthropological rationalism which stands close to human ontology and phenomenology.

Acknowledgements

OF THE 14 papers of the book only 5 (Chs. 4, 5, 6, 12 & 13) have been published earlier. Chapter 4, "Reason: Sovereign Autonomous and Human", and chapter 5, "Copernicus Betrayed", have been taken from one of my earlier books, *Individuals and Worlds: Essays in Anthropological Rationalism*, Oxford University Press, Delhi, 1976. Part of the material of chapter 5 was published in the *Journal of Philosophy and Phenomenological Research* in 1971. The material of chapter 4 was presented to a seminar held at Poona University at Pune in 1969. These two papers indicate an earlier formulation of my view on the nature of (paradigmatically, human) *reason*. Since the said book has gone out of print I thought that at least these two of its papers should be made available in print. Essay 12, "Bolzano and Frege : A Note on Ontology", was published in *Logic Ontology and Action : Jadavpur Studies in Philosophy*, Vol. 1, ed. by Professors D.P. Chattopadhyaya, P. K. Sen and S. Bhattacharya, MacMillan, Delhi, 1979. Essay 13, "Models and Metaphors in Arts, Science and Mathematics", was first published in *Logic Language and Necessity : Jadavpur Studies in Philosophy*, Vol. 3, ed. by Professors D. P. Chattopadhyaya, P. K. Sen and S. Bhattacharya, Macmillan, Delhi, 1981. Material of chapter 6, "Unity of the Physical World and Human Freedom", was first presented as Manjulika Guha Memorial Lecture at Science College, Calcutta University, in 1985 and later on published in the *Journal of Indian Council of Philosophical Research*, Vol. IV No. 1.

Essay 2, "Science History and Philosophy" was delivered as the address of the General President, Indian Philosophy Congress in 1987. Material of chapter 3, "Epistemology Demythologised", was presented as the keynote address to the Seminar on "Is Epistemology Sociology of Knowledge?" held at Panjab University, Chandigarh, in 1984. Essay 8, "Are Naturalism and Humanism Historically Antithetical?", was an invited paper to be delivered as a Sectional President at the Extra-ordinary World Congress of Philosophy at Cordoba, Argentina, in 1987. The paper was submitted but, unfortunately, I could not be personally present.

Essay 9, "Freewill Determinism and History", was read at the Seminar on the Philosophy of G. H. von Wright held at the Academic Centre of Indian Council of Philosophical Research, Lucknow, in 1985. Material of chapter 11, "Sri Aurobindo on Knowledge and Language", was delivered as a lecture at Visva Bharati, Santiniketan, in 1985.

Essay 15, "Enlightenment Communication and Silence", in an abridged form, was presented to the Friday Seminar, Calcutta in 1982. The members of the Friday Seminar, especially Professor P.K. Sen, Shri Tirthanath

Bandopadhyay, Dr. Shefali Moitra and Dr. J. Van Kleeve (who was here then on a Visiting Fulbright Scholarship), made some very useful comments. I remain grateful to all of them.

For permission to include the published papers in this book I am grateful to the concerned publishers and editors.

During and after the presentation of the above essays on different occasions I have been much benefited by the criticism and discussion which invariably followed. I have been immensely benefited by my critics and commentators. Unfortunately, they are too numerous to be individually named and thanked.

I take this opportunity to record my sincere thanks to Sri N. P. Jain and Sri Som Raj Gupta for their very many helps for making the publication of this book possible in its present form. I am deeply grateful to Sri Buddhadev Bhattacharya for his interest in planning the look of the book.

At different stages of preparing the essays collected in this volume I have been influenced by three members of my family in different ways. Supriya, my daughter-in-law, and my most fierce critic, never ceased to remind me how biased and prejudiced am I in all human affairs, domestic as well as academic. Debibrata, my son, all along a silent critic of mine, could hardly conceal his wonder at the "futile" labour of his "otherwise sensible father" on writing a spate of "unreadable" books on philosophy. Sohini, my granddaughter, and the lone supporter at home, often sitting on my writing desk and taking away my pen and papers tried to convince me in vain how *not* to write useless things. To this critical tribe I dedicate this book.

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I

Scientific Realism

SCIENTIFIC realism is a much talked of subject of our time. Perhaps it has been so for a very long time as is evident from the history of science and philosophy. The controversial nature of the problems pertaining to the subject may be a good enough reason to take it up once again. There are certain problems of life which, though not soluble to the satisfaction of all concerned, cannot be denied or disowned by anyone. It seems to me that the problems regarding realism (*versus* idealism) are of this nature.¹

Like the themes of literature and subjects of fine arts, the problems of philosophy are open to diverse, almost endlessly diverse, formulations and treatments. This comparison between the themes of literature and the fine arts, on the one hand, and those of science, on the other, is likely to be resented by many on the ground that while the artists are free to create their worlds, the scientists are cognitively obliged to picture, or at least to capture, *the* world as it is. Those who reject the thesis of "art for art's sake" or, like the Marxists, are committed to "socialist realism" in the area of arts and aesthetics are sure to affirm the cognitive obligation of the artist too.² It is argued that though imagination and interpretation have a big role to play in artistic creation, their role is not absent in scientific theory-construction either.

The very fact that we find it extremely difficult to formulate the problem of scientific realism appears by itself very instructive to me. Unless we can arrive at a reasonably agreed upon formulation of the problematique of realism, it is difficult to think of a solution which would be equally acceptable to all of us. One may conclude, in despair, that all our arguments for and against realism are only persuasive and never conclusive. Whether this "desperate conclusion" is really desperate or conclusive remains an open question.

Let me try to formulate the different aspects of the problematique of scientific realism.

Perhaps the simplest formulation of realism is that the world and its objects we (human beings) experience exist independently of, and external to, the concerned experience. For example, one has to recognise the difference between (what is) *red* and the *experience of* (what is) red.³

Even this simplest formulation lacks in clarity and is marked by a number of ambiguities. First, it is difficult to *show* that the world (together with its objects) which is believed to be there, and the world which we succeed

in capturing in our experience, or picturing in scientific propositions, are *essentially* the same. The term "essence" is often used rather vaguely in philosophical writings. One does not know how the identity of the *believed* world and that of the *experienced* world can be conclusively shown. The sorts of experience which are admissible in support of our belief (in this case of the world and its objects) may not be admissible in support of our experiences of allegedly the same world. In that case, we have to find out the way of establishing the "structural" identity of "the real world" and "the experienced (or empirical) world". Wittgenstein's notion of elementary proposition as a picture of atomic state of affairs (of the world) is a suggested way out of the impasse. The truth of the picture is shown by the proposition itself and needs no extraneous evidence. But is the word "structure" in this context free from vagueness?

In case we are prepared to retreat slightly from this position and affirm that the "real world" is *somehow* captured in the empirical proposition and that this affirmation may be confirmed or infirmed by evidence, we are immediately landed in a host of problems and required to answer many disturbing questions.

The first question which comes up in the mind is whether the "gap" between the world and my experience of it is *satisfactorily* bridgable. The question may be reformulated thus: can the world be *truly* captured in my experience? The second problem is with the expressions "satisfactorily" and "truly". Are *truth* and *satisfaction* inter-changeable notions? A view or theory of the world may be satisfactory without being true. Or, it may be true without being satisfactory. It must be remembered here that neither *truth* nor *satisfaction* is a non-ambiguous term. For example, when we speak of 'satisfaction' in the logico-mathematical contexts, we mean one thing. But when we speak of it in the psychological—human or animal—contexts we mean some other thing. Note that we are speaking of things and not of thing. What (knowledge of the world) will satisfy human beings, how and when, cannot be unrestrictedly generalised. The human quest for knowledge is found to be almost always *interested* and influenced by valuation, *expectation*, etc. Naturally, the question arises whether, given these highly variable factors, the world can be captured in my or our experience or knowledge.

When I use the expression "my or our", I am bothered by another nagging question. It is difficult, if not impossible, for me to be honestly convinced that my knowledge of the world is really true and shared by other human beings. Reflection reveals that this question may be refined in various ways. If my experience is peculiarly mine, i.e. strictly solipsistic in character, it is not sharable by others. If it is claimed to be sharable by others, it is difficult to justify the claim because the experience of sharability itself has to be shown as sharable. It lands one in a sort of infinite regress. True, regress may be stopped or avoided by taking an "arbitrary" stand or decision somewhere and stating something like "we are *practically* satisfied that this view

is shared by all of us". In support of this (shared world-) view the evidences of *our* like behaviour-patterns, decisions, actions, etc. in like situations may be cited. But here one notices a shift from cognitive realism (realism of knowledge) to behavioural realism (realism as evident from our behaviour, etc.).

The transition from the possessive (case) *our* to the nominative (case) *we* poses certain problems. What is the identity of *this* "we" and how does it differ from *that* "we"? Further, if "we" is talked about in relation to this situation or that situation, the problem (of sharability) becomes all the more complex.

The "transition" from psychologism or solipsism to sociologism is rejected by the transcendentalist of the Kantian or the Husserlian persuasion. He feels that neither in our sense-perception nor in our understanding is the world truly captured. To him the solution for the problem lies in the *constitution* of the world by the mind. But, again, analysis reveals that the term "constitution" is used here in a special sense and with certain presuppositions. Broadly speaking, the presuppositions are *transcendental* or transcendentially oriented. Otherwise, the problem of solipsism will remain unresolved. If we are prepared to *assume* that we, all *rational* human beings, are endowed with the capacity of constituting the world, only then can our claim of knowing a commonly sharable knowledge of the world make sense. But the points to be noted here are (a) *constitution* performs the role of knowing and, therefore, (b) the very problem of "capturing the world" disappears. If we, (by definition) rational beings, author or create the world, the talk of our being mistaken about it makes little or no sense. And in that case, the question of evidence, i.e., its admissibility and necessity, proves to be inconsequential to the uncompromising transcendentalist. The transcendentalist is essentially anti-evidentialist. He is opposed to the very idea of making the fortune of what he constitutes, i.e., the world-view, dependent upon some evidences not constituted by him.

"Constituted knowledge" thus turns out to be the "pictured knowledge". In neither case is relativism or scepticism tolerated. These problems are not allowed to appear at all in the scene of the knowledge of the world. The problems of capturing the world are bypassed or skirted by "the transcendental constitutionist".

All "constitutionists" are not of the same opinion regarding the scope of what man can possibly constitute. Assuming that the world is constituted by us, some maintain that man can constitute only the basic "bits" or "elements" of the world. This view may be called "local constitutionism". Some others maintain that man can constitute blocks or parts of the world. The second view may be designated as "block constitutionism". The latter is found to be modest in its epistemic claim. For it does not go so far as to claim that the whole world can be constituted by man with his constitutive powers. But there are ambitious constitutionists who affirm that the world is indeed

constituted by man with his powers of knowing. In order to avoid “dogmatic” or “postulated” or common sense realism these holist or global constitutionists are obliged to hold that human beings are the creators or authors of the world they know. To them, knowing, in a way, is a sort of making. What is more, the global constitutionists are not prepared to admit that the world they make or know is open to question or correction (certainly not from without). They are opposed to admissibility of external evidence. One gets the impression that this third group of “constitutionists” is of the view that the constituted world and the human beings who constitute it, are essentially or internally isomorphic. I.e., the former seems to be an articulation, unique articulation, of the latter. This is a form of self-evidentialism. And one may recall Leibniz’s monadological epistemology in this connection.

I do not propose to put a name tag on each of the above three forms of constituted world-views. The first view, “local constitutionism” cannot be ascribed to Wittgenstein.⁴ For, in between elementary propositions, on the one hand, and atomic states of affairs, on the other, he does not recognise any third (human) factor. But it seems to me that some of the writings of Russell (1914-1923) may be interpreted as supporting the thesis of local constitutionism.⁵ I am also inclined to believe some Vedantic theories of perception lend support to this view. But I am not very sure if the historical examples I have quoted are correct.

Many realistic theories of knowledge, those of Popper⁶ and Sellars⁷ for example, may be referred to as examples of block constitutionism. Of course, one has to be very cautious here. For, though they both discard the “myth of the given”, they insist that only our *world*-views are “constituted” by us and not the basic bits of the world. However, they recognise the admissibility and necessity of evidences in bridging the gap between the world and our view about it.

In an extended sense even Kant may, perhaps, be presented as a defender of block constitutionism. The empirical world, according to him, is constituted by human understanding. Since the empirical world is not the whole of reality which includes things-in-themselves, our understanding cannot be claimed to be the creator of the reality as a whole. In Kant’s empirical realism, scientific view of the world, the role of evidence seems to be negligible, if not nil. The certification of the correctness of what is constituted by understanding, i.e. the scientific world-view, is solicited and obtained not from below—from sense-experience or blind manifold of senses—but from above—the transcendental unity of apperception. It is *via* the latter that Kant makes one’s (scientific) understanding universal—sharable by (all) others (at least in principle). Though Kant occasionally speaks of correspondence (in the context of truth), his theory of knowledge, taken as a whole, seems to be overwhelmingly coherentist, and the main principle that makes this coherentism, i.e., inter-subjective sharability of knowledge, possible is, as noted earlier,

the transcendental unity of apperception. The objects which are constituted by the use of some definite categories and concepts cannot but correspond to what constitute them or make them possible. So the significance of correspondence obtained between the categories and concepts of understanding, on the one hand, and the objects constituted by them, on the other, is rather trivial. The more important part of the issue is how *all* the objects of nature are found to be mutually consistent or coherent. It is the supposed unity of understanding, backed up by the super-unity of apperception, which makes the unity of nature possible. The effortless achievement or bloodless victory fails to explain the persistent scientific problem of infirmation of scientific theories by "unexpected" or recalcitrant objects of nature.

When we use the metaphor of picture in order to defend scientific realism, our claim to realism is confined to "bits" (or states of affairs) of the world. When we try to extend our claim to "blocks" of reality or whole of it, the weakness of our claim becomes clear. "Logical construction" of the blocks or of the whole world, ontologically speaking, cannot conceivably be a picturing activity. Neither the blocks nor the whole world is epistemologically available or presented to any man. Given this "limitation", one's realistic claim in respect to everything beyond the picturesque bits turns out to be human constructs. The moment we leave behind the atomic states of affairs and try to know blocks or medium-sized objects and the whole reality and anything between the two, we are thrown back to the *questionable* area of construction or constitution. That by following mere logical steps, we cannot correctly or unquestionably construct the real world and its objects, whatever might be their size, is evident from the necessity of undertaking observational and/or experimental measures in scientific inquiry. Unless it is assumed (a) that the structure of the world itself, each and every bit of it, is logically constituted, and (b) that human ability of construction (or constitution) is identically logical, it is difficult to discover the passage from the human mind to the real world, or, from the latter to the former. But further reflection shows that even if these two assumptions are granted, the two passages just spoken of are not available to us as "proofs" of scientific realism. For one can always point out different logics and different possible logical steps leading to different results. All logics do not speak of leading us to the same world. For example, the logic of the intuitionist, not committed to the Law of the Excluded Middle, takes what is "provable" as what is "true". To him, provability is truth. To accept provability as realism is not possible outside the system of intuitionism—in, for example, logic and mathematics.

Perhaps, the most widely prevalent form of realism is rooted in commonsense or what may be called animal faith. But immediately we are reminded that scientific realism is not commonsense realism and that even animal faith is at times shaken, even badly shaken. More important, commonsense and animal faith are not conclusive proofs of realism. The fact that the necessity of evidence is felt for the vindication of realism is an indirect proof of the

inadequacy of animal faith and commonsense as forming the bases of scientific realism.

The question arises: What is *our* aim in science? Is it truth that we seek in science? If the corpus of propositions or theories called science is required to be true in all respects, can we have it? Did we ever have it? What is the verdict of the history of science? What is it that makes us believe that we can possibly have one day a corpus of theories in which every theory, and every propositional constituent of every theory, will be found to be true? Is it a *practically* acceptable scientific research programme? Or, is it even a *logically* admissible scientific research programme? Is it not interesting to note that realists like Popper who emphasise so much the importance of truth in scientific investigation consciously admit that "it is the aim of science to find satisfactory explanations"? If it is satisfactory explanations that we are primarily seeking in science, where exactly does stand our commitment to, and quest for, truth in science? Must we be thrown back to the view that what is cognitively satisfactory is true? Will not the acceptance of this view amount to subscription to a sort of pragmatism which is often pitted against realism? Or should we, like Nagel, say that the difference between realism and pragmatism is a matter of preference of language—depends on our preferred mode of speech?⁸

Strictly speaking, science has no aim of its own. It is we, human beings, especially the scientists themselves, who credit science with this aim or that aim. Scientific knowledge may be interpreted in terms of realism or idealism or some other philosophical creed.

The concept of truth, as we have noted earlier, lends itself to different explications. Different theories of truth formulated in terms of correspondence, coherence, pragmatism, etc. show that neither philosophers nor scientists themselves are unanimous about the nature of truth and the criterion in terms of which it may be tested. Even the notion of correspondence which appears, intuitively, very clear has been interpreted in different ways. Correspondence between propositions and facts or states of affairs may be interpreted in terms of picture or in those of structure. Sometimes we are told of correspondence between a linguistic expression of a proposition and its metalinguistic name. In the semantic view of correspondence as developed by Tarski and his followers, we face the problem of finding out recursive definitions of the terms of natural languages. The availability (or otherwise) of proclaimed correspondence between a proposition and the fact or the bit of reality it stands for, may *somehow* be decided; because of the limited scope of the issue, it seems experientially manageable. But when we are called upon to examine the claim of correspondence between scientific theory of a broad scope and the big or widespread chunk of reality with which it is concerned, we encounter numerous difficulties. By examining the correspondence-claim of each proposition falling under the scope of the latter kind of theory, we cannot decide the truth-value of the theory as a whole. Truth of a scientific

theory of a broad scope is not derivable from its constituent propositions. For the constituents may prove heterogeneous. Heterogeneity may be related to truth-value or may be morphological or be both. Besides, the theoretical terms figuring in different propositions make it empirically very difficult, if not impossible, to ascertain whether the propositions do or do not correspond to the "concerned" small bits or big parts of reality. Given this ontological constraint, the inductive transition from the *constituents* of the theory to the *structure* of theory itself proves irrational, almost impossible.

To vindicate the realistic claim of a theory by reducing it or translating it into *transparent* observational language does not appear to be very promising. The very purpose of theorising is to go *beyond* the cramping bits to the large chunks of reality and to say something more about the latter,—"the more" which is not readily available to sense-experience. And, at the same time, the realistic theoretician's claim is that what his theory asserts is true, i.e., what it refers to is there in the world and open to possible tests. The realistic ontological claim of theory cannot be *instantly* vindicated or rejected. It is in this sense that it remains always *provisional* in character.⁹

The provisional character of theory need not be taken as a proof of its weakness. On the contrary, it is proof of its openness, i.e., the readiness to face the tribunal of experience, both individually and collectively. I say "and collectively" because every provisional theory stands in league with some other (in most cases) neighbouring theories. My reference to neighbouring theories is intended to differentiate my position from the Duhem-Quine holism, on the one hand, and the Wittgenstein-Popper localism, on the other. The former drags us to boundless coherentism, reminiscent of the Bradley-Bosanquet variety of metaphysicalism (of vanishing distance), the latter tends to pin us down to the highly localised bits of reality, reminding us that our "bold" attempts to get beyond them will land us in instrumentalism or abysmal provisionalism.

Are we, then, to conclude that the real world that we propose to capture in our scientific theories is destined to be elusive? Obviously, the despair underlying the question is at variance with the widespread popularity of realism in science. Most of us do believe that we seek and find facts. Scientists assure us that they do catch facts by the net of the theories they cast and it is difficult to deny that they often *show* their catch, i.e., the facts, to our satisfaction. Further, the non-theoretical moments of our life, and most of our practical behaviour strongly suggest (provided, of course, we are not paranoid or neurotic) that we are successful in our commerce with the real world.

Collateral to our practical success in relation to the real world is the usual success of our scientific (theoretical) predictions or inductive projections. If our knowledge could have tied us down only to the proximate bits of our experience, keeping us totally ignorant of what lies beyond them, even our practical life would have been extremely restricted, almost unlivable by our

own human standards. From all this it appears that realism is the verdict handed over to us both by theoretical reason and practical experience.

All this sounds fine. However, the issue, at close look, seems to be rather complex. With the fall of the picture-theory of proposition (not necessarily of Wittgenstein), many other planks of scientific realism fall through. It is not at all surprising to hear the story of utter disappointment expressed by Wittgenstein when it was pointed out by Sraffa to him that the simple form of the elementary proposition (showing what is picturesque) is a myth. The self-shining (or truth revealing) character of the elementary proposition is contingent upon (a) the availability of logical proper names successfully naming objects (in the world) and (b) concatenation of propositional components directly representing the configuration of objects (in the world). The failure of "proper names" to demonstrate their propriety and that of the concatenated propositional components to show their isomorphism with the configuration of objects take away the realistic glue of realism. If there is nothing to glue knowledge and the world together, how could one possibly vindicate the realistic claim of scientific knowledge? For comparable reasons, the claim that designators have a rigid relation with their designata appears suspect. Either logical proper names are glued *forever* to their referents, or we must assume that their relation to them is somehow (say, causally) established. If proper names are always 'proper' and designators rigid, it is difficult to imagine how, given the "unalterable" character of bits and/or kinds of reality, can we even possibly build up a structure of knowledge, in this case of science, which is essentially changing or historical? *Per contra*, if the relation between proper names and their nominata or rigid designators and their designata is a matter of establishment (causally or otherwise), it is difficult to see why the relation cannot be disestablished, i.e., changed over time. Either of the said alternatives raises doubts about the proclaimed *direct* relationship between knowledge (or its linguistic equivalent) and the world (or reality).¹⁰

Given the above difficulty, the realist is obliged to retreat to the relatively modest aim of capturing reality in theory. But, as indicated earlier, our efforts to capture the world as a whole or its chunks or even its small bits prove *questionably* successful at best and abortive at worst.

The search for the cause of this rather disappointing conclusion seems to yield the following. The moment we recognise the *indirect* character of the relation of gap between names and the nominata, between propositions and facts, objects or their configuration (whatever we call them), our strong realistic claim gets weakened, and possible escape routes from this situation are found to be very few in number and hazardous in character. Vindication of realism requires us to take our task of *fact-finding* very seriously. But, intriguingly enough, "facts" found out, it appears, complain that their identity has been tampered with and distorted by the finder in the process of finding. In other words, what is said to be directly given, i.e., pure fact, on analysis, is found to be indirect, or mediated or interpreted; and the realist's claim of

capturing the reality *as it is* turns out to be highly questionable and evidentially corrigible. Besides, once it is admitted that there *is* room for interpretations of the given, it is implicitly conceded that there are different and *alternative ways* of interpretation. If the "same" given fact lends itself to alternative interpretations, it is difficult to prove its "sameness" under alternative interpretations. In that case, one might say, *fact finding*, a basic requirement for the vindication of scientific realism, is a futile undertaking. More affirmatively speaking, fact finding *operations* entail *fabrication* of facts. *Fabrication* here means *interpretation*.

If finding of a fact is not separable from fabrication of a fact, we are pushed to two further apparently anti-realistic consequences. Firstly, if *found* facts are necessarily fabricated, how do we distinguish between what is *rightly* fabricated and what is *wrongly* fabricated? The question may be put in a more radical form. If a fact is destined to degenerate into fabrication, what possibly can save it from further degeneration into a *fiction*? Should we say fictions are *wrongly* fabricated facts? Even to justify this view the *separate* identities of (a) what is a fact (found or unfound), (b) what is a fabricated fact, and (c) what is a fiction need to be shown or established. Secondly, since for the purpose of fabrication or interpretation in different ways different fictions or hypotheses are called for, the relative relevance and strength of the same have to be established.

By blurring the distinction between a "real" fact and a fabricated fact, and between what is fabricated and what is fictitious, I do not propose to refute scientific realism. Realism, scientific or not, though differently conceived, stands more or less unrefuted. It would be rash to characterise realism as metaphysical in the bad sense of the term. One argument against its refutation is that what makes refutation possible has to be accorded a realistic ontological status. To put it differently, the presupposition of the refutation of realism is itself realistic. By something *unreal* one cannot refute what is *real*. One cannot indefinitely quibble over the definitions of "real" and "unreal", keeping them in bracket or treating them as suspended *epoche* concepts.¹¹

My reference to the concepts of (found) fact, (fabricated) fact and fiction is intended primarily to show that "one and the same world" lends itself to different ways of theoretical construction and articulation. The main reason why I use the expression "one and the same world" as *epoche* or bracketed is that I cannot capture it directly. This inability, however, need not be construed as impossibility of our encounter with, or knowing, the world. To say, as we do, "all scientific knowledge is interpreted" is not to deny that it is *of* the world and that it is questionable and corrigible in the light of our experiences, however theory-laden they might be. The idea of correcting a theory "based" on experience by experience is *not* misleading. For the experiences which go into the making of theory are not exactly the experiences which question it and correct it. The idea of "question and correction of experience by experi-

ence” may sound phenomenological. Perhaps it is. But that does not mean that any of the said two (or more) sets of experience are rootless, i.e. not rooted in reality—reality authored neither by me nor by you, reality that refuses to be encompassed by tenets like *esse est percipii* or *esse est concipii*. Neither man’s perception nor his conception can create reality or make it possible.

However, this formulation needs qualification and clarification. That the essence of a thing does not consist in its being perceived, perceived *by man*, is evident when the notion of transcendental God (or some such analogously functional principle) is invoked. The point to be noted is that the transcendental principle which is taken to be generative as well as supportive of the basic perceptualistic tenet is not itself subject to the tenet. The conceptualistic tenet is claimed to be both generative and certificative of the world (and its objects). Neither perception nor conception as such is creative of objects. Strictly speaking, creativity is being implicitly ascribed to man, this man or that man, or man in general. “This man or that man” is understandable and alright. But “man in general” raises many questions. One suspects that it is intended to fend off the possibility of scepticism or relativism or both. “Man in general” is being preferred to “this man or that man” as the author of the *objective* world.

A spectre haunts the world of scientific knowledge. And the spectre is of relativism and/or scepticism. There are two main *mantras* or strategies to chase this spectre away. One is to resort to the transcendental argument (or its functional analogue). It is self-supportive and, in the case of necessity, lends support to non-picturesque elementary or basic propositions. And the other is to postulate a self-existent real world irrespective of its being known, perceptually or conceptually. Self-evident transcendental principle and (postulated) self-existent world serve analogous theoretical purpose, i.e., to fight back relativism and/or scepticism. In the process of doing their job, one feels, the said two principles overdo (it). The self-righteous stance of transcendentalism and direct realism smacks of self-evidentialism.

And this is precisely what is at variance with our common sense, artistic sense, and scientific sense. For we are persistently encountering different common-sense views of the world or cosmologies. The point is strongly defended by the working anthropologists. Secondly, scientists have been presenting us different paradigms of science at different times or different images of science at the same time. This point has been repeatedly brought to our notice by scientists, philosophers and historians of science. Finally, artists, litterateurs, and poets keep on reminding us that their worlds, though not literal copies of the “real world”, are made up of the “things” and beings of it. The scientist may not be as modest or conscious as the artist is. But he hardly claims that his “paradigm” or “image” of science is the only one that is possible. What he recognises in effect is the different possible ways of constructing the world. However, this is not to say that the scientist’s ways of

world-making and the artist's ways are methodologically identical. Their aims are different, viz., to *explain* satisfactorily and to *express* coherently. But, one feels, both in theory and practice the world they deal with is "the same". The *possibilities* of different world(s) are grounded in the "same world". The main responsibility of unbracketing the meaning of the "same world" is being continuously discharged by our common-sense, the most reliable ally of our life. To ask for a fool-proof *theory* to defend this modest theory of (scientific) realism is to beg the question.

NOTES AND REFERENCES

1. Both to Kant and Husserl the endless controversy over idealism versus realism appeared as a scandal of philosophy. It is interesting to note that neither of these two philosophers could totally extricate himself from this "scandal".
2. See, for example, John Hospers' paper, "The Croce-Gollingwood Theory of Art", in John Hospers (ed.), *Artistic Expression*, Appleton-Century-Crofts, 1971, pp. 51-71; and Milton C. Albrecht, James H. Barnett & Mason Griff, (eds.), *The Sociology of Art and Literature*, Gerald Duckworth, London, 1970, pp. 621-32.
3. It is not easy to clarify the distinction between "the external" and "the internal", "the inner" and "the outer" and the like. Husserl's attempt to solve the problem in terms of intentionality taking every "experience" as "experience-of" raises a problem regarding the reality of fictional objects. Not that he has not addressed himself to this delicate problem. The noematic end of fictional object and its difference from that of scientific object prove still problematic. Quine's somatological reductionism offers another solution of the problem. But the persistent question of the relation between the "nerve-endings" and "the world beyond" remains unanswered or, at best, unconvincingly answered.
4. L. Wittgenstein, *Tractatus Logico-Philosophicus*, 5.64 and 5.641. See also Derek L. Phillips, *Wittgenstein and Scientific Knowledge: Sociological Perspectives*, Macmillan, London, 1977, pp. 95-9 and 120-3.
5. See, for example, the papers of W. V. Quine, Gustav Bergmann and Herbert Hochberg in *Essays on Bertrand Russell*, ed. by E. D. Klemke, University of Illinois Press, Urbana, 1970.
6. K. R. Popper, *Conjectures and Refutations*, Routledge & Kegan Paul, London, 1963, pp. 123-19.
7. Wilfrid Sellars, *Science and Metaphysics*, Routledge & Kegan Paul, London, 1968, pp. 151-71. See also his, *Perception and Reality*, Routledge & Kegan Paul, London, pp. 76-90.
8. K. R. Popper, *Realism And The Aim of Science*, Rowman & Littlefield, Totowa, N. J., 1983.
9. This is a point which is being emphasised by Popper from the days of the Vienna Circle at Vienna and has been later on graciously acknowledged by Carnap. From *Aufbau* to Carnap's concept of constituent-structure (in I. Lakatos, ed., *The Problem of Inductive Logic*, North-Holland, Amsterdam, pp. 218-20) is indeed a very long and instructive journey. See also his, "Probability and Content Measure" in Paul K. Feyerabend and Grover Maxwell, eds. *Mind Matter and Method: Essays in Honour of Herbert Feigl*, University of Minnesota Press, Minneapolis, 1966.
10. See Chapter V, 'Significance and Interpretation', of my forthcoming book, *Anthropology and Historiography of Science*.
11. In this context I am indebted to Nelson Goodman (*Ways of Worldmaking*, Hackett, Indianapolis, Camb., 1978, pp. 7-21, 91-107), Hilary Putnam, *Reason Truth and History*, Cambridge University Press, Cambridge, 1981, pp. 201-16, and Richard Rorty *Philosophy and the Mirror of Nature*, Basil Blackwell, Oxford, 1980, pp. 35 7-94.

Science History and Philosophy

HISTORY breathes life into science.¹ History is the life-breath not only of science but, rightly understood, also of philosophy.² The days are gone by when the spirit of Enlightenment induced many to believe in the finality of science of the time and the infallibility of philosophy. The true science, born of self-critical abilities of man, is continuously engaged in tracing the historical course and the human roots of both science and philosophy³. When man stops interrogating his own abilities underlying his cognitive achievements, he tends to become socially stagnant or intellectually dogmatic or both. Self-reflection and self-interrogation are, at times, induced by the problems, both theoretical and practical, of man's own life-situation. The life-situation need not be necessarily construed from without.⁴ Man's lived life often proves to be his Other, making it necessary for him to think of what he is doing and having. The Self/Other duality accounts for our self-critical, creative history.

I am aware that the above assertions of mine are based on a number of assumptions and certain definitions of science, philosophy and history. This is a situation which one cannot help. Presuppositionless assertions and totally "indefinite" dialogue are not humanly available. Non-disclosure of the presuppositions of most of our assertions leads many of us to believe that some of our statements are indeed *pictures* of the "concerned" states of affairs.⁵ Scrutiny, however, reveals that neither we nor our statements stand completely disclosed—requiring no further exploration or interpretation. This ever incomplete nature of our self-disclosure accounts for the endless process of our history, of what we think, and of what we do.

To what is due this incompleteness or lack of finality of science? Wherein does, then, lie the proclaimed superiority of the scientific mode of knowledge? Is it merely an empty, fashionable slogan? Without belittling or overrating the dignity of science, the questions have to be closely looked into.

Instead of opting for this or that definition of science, it would be perhaps, more advisable to describe the characteristics and the career of science.⁶ There was a time when science was hardly distinguishable from philosophy. Almost all ancient philosophers were scientists of a sort. Most scientists were philosophical in their orientation. They were conscious of what they were doing. Like the economic division of labour, the intellectual one too has largely been the outcome of the needs for specialisation.

Placed in nature and interrogated by its forces, man is objectively obliged to look more and more closely into the secrets of nature. Contrary to the popular belief, the Book of Nature is not open to the uninitiated. Even to the initiated, it is only partially open. Nor do the secrets contained in it are disclosed to him.⁷ The secrets of nature are twofold—micro and macro. The authors of the ancient treatises of medicine, for example, are found to be knowledgeable not only in medicine but also in ecology and philosophy.

Until very recently, there were no borderline disciplines like bio-chemistry and bio-physics. Within the broad scope of physics one finds today so many branches indicating the imperative of specialisation. This does not mean that the issues studied within the scope of specialised or borderline disciplines were not at all known in the past. What I wish to suggest is that the social and cognitive needs of specialisation were not felt as acutely then as now.⁸

Knowledge begets knowledge.⁹ The quest for knowledge brings new problems to the fore and, in the process of solving them, the scientist gets into the deeper secrets of nature, acquires new knowledge for himself and shares the same with us, the public. Need begets need.¹⁰ In the quest for fulfilment of our needs, we search for new science and new technology. That is, we create demands for additional investment of our intellectual and other resources for the production of scientific knowledge and technology. It is in response to our increasing social needs that more investment comes forth for science and its practical application.

In response to changing socio-historical needs, the different systems of Indian philosophy interpreted the Vedas not only in terms that differ from each other but even in those that clearly contradict each other. From the same New Testament how many diverse sects of Christianity have emerged! Has not Marxism in our own time lent itself to different and rival interpretations? All these are sought to be plausibly explained in terms of different socio-historical *needs* leading to creative and dialectical hermeneutics.¹¹

Needs, broadly speaking, have two aspects—(a) creative and positive, and (b) alienative and negative. When partial fulfilment of our cognitive needs motivates us to enlarge our knowledge or cognition, it is welcome. When knowledge in practice reduces human suffering, the additional needs this Knowledge creates for us are equally welcome. But in a stratified, if not a fragmented, society, where we get exclusively concerned with our own sectarian or highly private needs, we tend to deny, wittingly or unwittingly, others the means to satisfy their own needs which are not congruent with ours. Fastened to our own needs, we get alienated from and become objectively opposed to others' needs. In the process we harm the social cohesion.

A comparable situation develops also in the field of science. The need of science has been differently interpreted. Some are of the view that science is knowledge, pure and simple. It enables us to know ourselves better; it gives us a clearer picture of our environment, natural and cultural; and it defines

better our position in relation to the world at large. But this very general and attractive view of science has met with opposition from many quarters. For example, it has been said that science is a camouflaged ideology; that its claim to objectivity is sham; and that in a class-ridden society it, like all other forms of knowledge, is used to serve the needs of the ruling groups.¹² Another view of science likens it to a highly specialised human construction of nature.¹³ It is basically 'constructive', i.e., selective and eliminative, and not descriptive, as it is often claimed to be. If man is said to be *in* his science, what it means is this. The models in terms of which the information of the world is organised, systematised and tested are human contrivances, reflective or expressive of man's own needs and purposes. If this view of science is accepted, it is difficult to deny its secret presence in other views as well. Complete de-humanisation or objectification of science seems to be an impossibility.¹⁴ In that case the element of alienation which is said to be there in science as ideology or even in science as an ideal picture of the world-with-man-in-it turns out to be partial or qualified, i.e. not total.

There is an inner tension in the very scope of science itself. On the one hand, it is required to go into the micro details of reality, human as well as natural. At the same time, it is led to the world at large through the human route and to man through the worldly route. Man's situation in the world is such that the scientist cannot grasp the former's true identity, ignoring his place in the world. Nor can the scientist adequately understand the world leaving man totally out of the picture.¹⁵ The higher reaches of physics—macro-physics or cosmology, come engagingly close to philosophy. This is a well-known and very old story borne out by the history of science. Though all the theorems of macro-physics cannot be logically derived from those of micro-physics and the converse, their close relation, if not unity, can hardly be denied. The behaviour of sub-atomic particles might not be satisfactorily accounted for by the two-valued logic and the casual laws of the general theory of relativity, but that does not methodologically oblige us to abandon the research programme for trying to see scientifically the world as a whole, as a unity.

To start with, I have said that history breathes life both into science and into philosophy. Now when we see that science and philosophy are interlocked in a "love-and-hate" relationship, in a conflict-cooperative situation, how do we define the connection between history, on the one hand, and science and philosophy, on the other? Before I attempt to answer the question, let me briefly spell out the implications of the question itself. If science and philosophy are coordinate species of knowledge and equally ideological in their character, how does history get into them and to what extent? Must we take philosophy as an interpretation of the world or of the world-views found in science(s)? The problem of answering the question becomes acute if it is assumed that history itself is ideology-loaded.¹⁶

According to some thinkers, sciences, in general, and the physical sciences,

in particular, are close to the material conditions of life and, therefore, their ideological load is minimal. Human sciences, because of their relative distance from their material base, are said to be thick in their ideological content. In between the physical sciences, on the one hand, and the human ones, on the other, one finds life sciences. Ethics, religion and fine arts are put at the apex of the pyramid of cultural products of man. This view has often been ascribed to Marx and his followers. Judged by the logic of the formation of this pyramid, even utopias are claimed to be sociologically rooted, despite their remote distance from their sociological origins, i.e., the material conditions of living.¹⁷

Philosophy, because of its abstract and seemingly rootless character, is often placed at the apex of the pyramid together with religion and ethics. This placement of philosophy is certainly not complimentary. When philosophy is not accountable to the ground-level scientific findings, it tends to be not only fanciful and alienated from the life-conditions but also suppressive of its own fancifulness and alienation.¹⁸ As an intellectual commodity, it suffers from its inherent fetishism.

It is clear that many philosophers are not prepared to accept this critical view about philosophy. They find in it a noble emancipation from the noisy details of different and specialised sciences. Besides, they find in philosophy a critique of scientific conclusions. Implicit here are the assumptions (a) that science *qua* science is neither self-reflective nor self-critical, and (b) that it is only in and through philosophy that science knows what it is all about, including its aims and limitations.¹⁹

Some adherents of the second view are in favour of regarding philosophy itself as a rigorous science, a sort of super-science. They claim to have found in it the contentual richness of all special sciences and, additionally, their connective and supportive principles. In philosophy, as science, details are only promised and not shown. Special emphasis is attached to the over-arching or transcendental principles purported to justify the fleeting details of different sciences.²⁰

I like to make one thing very plain at this stage. Like every philosopher, I am also provisionally committed to a particular point of view. I say "provisionally" because the *anthropological rationalist* point of view, to which I feel committed, is not an uncritical or dogmatic commitment.²¹ In the face of every possible criticism against me and my view, I do not feel obliged to take defensive refuge in or retreat into the said commitment. The transcendental view of philosophy, to which I made a brief reference, is obviously not my own view. But its conceptual and historical lineage is well known, both in the East and the West. The efforts to portray philosophy as science, preferably a super-science, is neither new nor peculiar to a particular culture. In its most general form, it turns out to be a transcendental philosophy of Being. Its main anti-thesis or enemy, declared or undeclared, is the experiential philosophy of Becoming, to-use again a very general expression.

The reason for this age-old epic battle between these two camps of philosophy cannot be understood unless the issues involved are indicated. To be fair to the transcendentalist, it has to be admitted that he is not totally unmindful of the fleeting details of science recorded in the history of science. His main anxiety is that if philosophy is required to be answerable to the details of the history of science, it fails to be rigorous and is sure to be bogged down, if not lost, in the swamp of relativism and scepticism.²² The point to be noted here, in minimum fairness to the empiricist-historist, is that he is not sold out either to scepticism or to relativism. He is also anxious to be fair to the demands of realism. He wants to remain accountable to the so-called fleeting facts of the history of science without any commitment to unquestionable transcendental principles.

All relativists should not be branded as sceptics. There are many respectable relativists who disclaim their relation with scepticism. To them, non-availability of *absolute* knowledge, if any, is not a matter of shame or remorse.²³ Man is, by his very nature, said to be related to a social milieu and limited in his physical and mental capacities. Therefore, the relativist argues, whatever is created by man—institutions, theory or argument—is only relatively valid. But there is nothing wrong in this sort of relativity. It is essentially symbolic of the humanness of what is thus created by human beings.

Notwithstanding this disclaimer and clarification, the so-called rationalist aims at attaining absolute knowledge whose truth-value is eternally attached to it. The defender of this ambitious programme is determined to bracket relativism with scepticism. Whichever piece of knowledge is relatively true is said to be dubious in principle. Truth-values are ascribed only to propositions, which, as abstract logical entities, are not themselves subject to historical mutation. But when we are forced to determine or answer the question of truth or otherwise of scientific statements, we cannot avoid the semantic aspect of truth. We are obliged to explore and, if possible, ascertain the relation between logical propositions and linguistic statements or sentences. The attending difficulties are not easy to solve. And it is no surprise that many philosophers prefer the vocabulary of sentence and statement to that of proposition. Indirectly this may be construed as a concession to the advisability of the historical approach to the whole question of truth.

To fend off the twin ghosts of relativism and scepticism at least three different strategies are available. First, a strong *correspondence* theory of knowledge coupled with a totally *objective* view of knowledge. The defender of this strategy argues (a) that knowledge has nothing to do with its human origin, and (b) that its validity or truth-value is a matter of correspondence between the statement of object and the meta-linguistic name of that statement.²⁴ Secondly, the *transcendental* strategy tries to show that empirical or scientific statements, unless backed up by some abiding principle(s), cannot stand on their own and are rendered invalid by infirming new historical findings. Here also an implicit theory of type is invoked.²⁵ The lower-level statements of

science are made dependent upon the higher-level or the transcendental-level statements of principles. In order to make both (a) and (b), the said two strategies, some plausible "coordinating" or "bridging principles" are logically called for.²⁶ Since it is not easy to spell out the characters of the said connecting principles, some philosophers come forward with a third strategy. The proponents of this strategy draw a sharp line of distinction, at times even of division, between "the empirical" and "the transcendental". They ascribe "lower-level" reality and "transient" truth-values to "the empirical" and "higher-level" reality and "permanent" truth-values to "the transcendental". The names of Sankara, Kant and K. C. Bhattacharyya are often associated with this strategy:²⁷

The main difficulty of the first strategy is that in its bid to de-historise knowledge it denies the relevance of man and his critical appraisal in the context of truth-value ascertainment. De-historisation entails de-humanisation of knowledge. Secondly, when truth is said to be language-bound, the question of recursive definition of the terms figuring in truth-claiming sentences becomes logically necessary. Under certain conditions, in formal mathematical languages recursive definitions are available. But the availability of recursive definitions in natural languages is yet a chimera. The problem attending the relation between natural language and its meta-language remains unresolved.²⁸ This seems to me the outcome of the problem of how to relate historical change in the terms of languages in which we frame and formulate our knowledge and the "corresponding" meta-language which is logically constructed and artificially insulated from the ravages of time.

The second strategy owes its origin to the fear of epistemological relativism and the anxiety to get out of it. The "materials" of knowledge admittedly require some "rules of synthesis" or organising principles. Compared to the former, the latter are bound to be transcendental. Transcendentalism, like empiricism, is a matter of degree.²⁹ Imagination transcends perception; understanding transcends imagination; and one can well conceive of transcendental thought which is beyond understanding and before which understanding itself may stand as object of investigation and reflection. But none of these steps or stages of cognitive journey can be shown as transcendental in a terminal or final sense. If, on the one hand, the transcendental principle is quite unlike the empirical materials which it is called upon to synthesise or organise as knowledge, it cannot perform its duty. If, on the other, it is like the empirical materials, its *historical* fortune cannot be very unlike that of the latter. It is in this connection that one is reminded of the wisdom underlying the Leibnizian law of continuity, *lex continuum*, connecting perception with apperception.³⁰ Leibniz's professional familiarity with history helped him to skirt the pitfalls of abstract rationalism which afflicted Kant, who was basically anti-historical.

The empirical has its compulsive or undeniable effect on the scientist³¹. But when he as philosopher tries to explain it, he feels unhappy with the

historical or the growing character of science. Somehow uncritically committed to the notion of knowledge with fixed truth-values, he does not know how to get out of the dilemma. His scientific sense recognises the historicity of scientific knowledge. But his transcendental-philosophical sense goads him to stick to the notion of permanent or enduring knowledge. He wants to get out of the dilemma by drawing a mysterious unspeakable cut-off line between the realm of science and super-science, between *aparā vidyā* and *parā vidyā*.

The main point to be noted here is that the term "knowledge" may be taken in two different senses, epistemic and ontic.³² Epistemic knowledge obviously is of this or that person, at least to start with. But ontic knowledge is an entity which may be discussed or even understood without reference to the life of this or that person. The distinction between the epistemic and the ontic is like that between the process and the product. True, *episteme*—valid knowledge, may be taken as something quite different from the process making it possible and, therefore, self-contained. But the very possibility of this method is being questioned. What in effect is being questioned is also the advisability or rationality of this method sharply dividing the process from the product. The bogey of *psychologism* underlying this ill-advised method of sharply drawing a cut-off line between the ontic and the epistemic is due either to a sort of Platonism or a sort of logicism or both. There is nothing particularly wrong with the psychological process of knowing—the process of acquisition of knowledge. In the name of Platonism or logicism what had been excluded from epistemology in the past has now come back either through cognitive psychology or philosophy of language. Much of the task of the traditional epistemology is now being gradually taken over by the cognitive psychologists or the philosophers of language. Like the forms of fashion, fashions of philosophising also change—but the substantive issues of knowledge remain.³³

Fuller implication of knowledge, be that scientific or philosophical, can hardly be grasped without perusing its underlying *historical character*. A product of history, man is at the same time its producer. Man as a product and producer of history is to be understood in his social relations with other fellow men. Whatever man produces bears the imprint of his being—historical being. What prompts man to know is not a matter purely of his private concern. His cognitive modification is rooted in some needs, some of which are more personalised in nature and some others more socialised in nature. In fact, man's cognitive enterprises are problem-oriented. Every act of cognition, rightly scrutinised, is found to be an attempt to solve some problem or the other. The aids, material and conceptual, needed to solve problems are in most cases borrowed, i.e., social, and not privately invented.

Language, for example, is a basic institutional aid for grasping the nature of a problem. Man is required to have also non-linguistic competences for correctly understanding the problems. Even social co-operation is necessary for arriving at a decision regarding the correctness or otherwise of suggested

solutions of problems. Through language and other communicative means we not only share and form concepts concerning epistemological problems and their possible solutions but also socially act together preventing the emergence of other sorts of problems.³⁴ The sociological aspect of epistemology is often forgotten or deliberately kept outside the concerned discourse because of its alleged awkward character or, what is more likely, its methodological inadequacy to do justice to the problem of knowledge.

I raise the question of Sociology of Knowledge not so much in "the context of validation" as in "the context of discovery".³⁵ Sociology is synchronic history. And history is diachronic sociology. Without de-sociologising knowledge, we cannot de-historise it. And without de-historising knowledge we cannot de-sociologise it. It is from this standpoint that one has to look closely into the history of both science and philosophy. In fact, as I said earlier, history is the life-breath of both.

The term "life-breath" is more than a metaphor. The main signs of life are birth, growth, decay and eventual death. History of culture or any sub-culture, like science, knows no literal birth or death. Certain conditions making birth of science possible precede its actual or identifiable emergence. Similarly, the so-called death of science leaves some traces to be identified in the subsequent history of science. We do not know of any science which neither grows nor decays. Even in the curve of scientific growth there are marks of occasional regressive shifts.³⁶ In other words, history of science is not history of uninterrupted growth. Interruption or stagnation need not necessarily be taken as signs of decay. When a paradigm or a cluster of paradigms of science encounter very disturbing or disconfirming evidences, its defenders are bound to pause and ponder. A scientific theory, which can survive the test of all possible evidences, is not taken seriously. If a theory is not disconfirmable in any way, its confirmation is of little consequence. Confirmation which is merely additive in character with no test-content is of little scientific significance. It is for this reason that history of science exhibits clearly a visible sign of life, i.e. growth.

Another reason why this sign is visible is this. Scientific theories, somewhat unlike the philosophical ones, are addressed to *specific* problems. This specificity of problems calls for specific theories for a possible solution of those problems. Theories may be specific because of the *limitation* of their scope or, as is the case with higher-level theoretical physics or cosmology, because of the specifiability of their boundary conditions. The specific theories which are not specific either in terms of their initial conditions or in terms of their boundary conditions are hardly testable and growing in character. They may be accepted or abandoned as a matter of taste or choice. The question of their establishment or dis-establishment in terms of experiential tests is not possible. Primarily for this reason, scientific theories are identified mainly in terms of their specificity and growth.³⁷

When these criteria are applied to the history of philosophy, the outcome

proves to be rather disturbing. The problems of philosophy—realism/idealism, rationalism/empiricism, transcendentalism/positivism, etc., have been debated down the centuries without any visible sign of either growth or death. The “eternity” or “immortality” of philosophical problems has often been interpreted in a pejorative manner. Some scientific-minded philosophers go to the extent of affirming that the philosophical problems are all bogus or scandalous, i.e. have no specific foundation, conceptual or experiential.³⁸ And, therefore, it is concluded, neither conceptual analysis nor empirical findings can decisively influence the career of the history of philosophy. The endless recurrence of philosophical problems is an unmistakable proof of their a-historical character, their remoteness from our living conditions, their social rootlessness.

This negative criticism is at times construed as providing some positive clues for *scientific* reconstruction of philosophy. What is suggested is this. Philosophy *qua* philosophy, i.e. in its pure form, is at best merely interpretative and at worst vacuous. The way out consists in philosophising on the basis of specific scientific findings. Related to the specifics of science, philosophy will hopefully assume, though indirectly and derivatively, a traceable historical character. Infusion of history in philosophy is a positive achievement ascribed to science.

History, rightly understood, means social action of human beings and their consequences, intended as well as unintended. To say that philosophers are engaged only in interpreting history is to reduce them to passive consumers. What is expected of them is that they play an active producer's role, re-creating history *for* mankind and demolishing the one that is *against* mankind.

An element of normativity or ideology is there at the core of human actions, responsible for shaping the course of history.³⁹ By implication, this view of history clashes with the view that identifies history with philosophy of history. Philosophical reflection on history may—in fact, does—bring out the hidden meanings of historical events. Philosophical interpretation of history adds to our intelligibility of it. If primacy is given to philosophy over history, and history itself is made to play the second fiddle to philosophy, the outcome is disappointing. Philosophies of history may interpret the same historical facts in terms so exclusive to one another as to render all facts or findings incapable of establishing their relative superiority or inferiority to one another. This partly accounts for the vacuousness of different philosophies of history.

What is called for to remedy this confusing situation is this. The specifics of history must be allowed to have their say in relation to our proposed interpretations of history.⁴⁰ Philosophical interpretations must not be *super-imposed* on the details of history. On the contrary, the latter should be allowed to provide character and content to the former. This brings me to my conclusion. C

Philosophy as pure reflection on Being or what is there or as attempted self-realisation hardly yields anything live or concrete. However, I do not deny that because of excessive or obsessive cultural determination, it may provide some of us emotional satisfaction of no mean consequence; but in terms of knowledge which has truth-claims and which either grows or decays we are hardly benefited. Unless philosophy is kept engaged in a critical dialogue with specialised sciences or at least with their history, it is likely to fly high on the wings of speculation and lose all touch with things and beings, ups and downs, visible underneath. Speculative or transcendental flight of philosophy should not mean freedom from critical engagement with, and commitment to, what is earthly and human.

NOTES AND REFERENCES

1. *President's Address, Indian Philosophical Congress, Srinagar, 1987

1. The tradition of historicism is very long and distinguished. In the West it is associated with the name of Heraclitus. In India the Buddhist tradition represented by Nāgārjuna and Vasubandhu are well known for highlighting the reality of change.

2. In the modern times the importance of historicism has been highlighted, among others, by Vico, Herder and Hegel.

3. See, for example, A. Robert Caponigri, *Time and Idea: The Theory of History in Giambattista Vico*, Notre Dame. University of Notre Dame Press, 1968; and Robert A. Nisbet. *Social Change and History: Aspects of the Western Theory of Development*, Oxford, Oxford University Press, 1970. When history is not self-critical, it tends to degenerate into static sociology.

4. The life-situation I am talking of can be viewed both from without and from within. The determinists like Engels are in favour of viewing it from without. The pro-phenomenological thinkers like Dilthey and Croce favour the "internal" approach marked with or without the element of "intentionality".

5. When I say this I have in mind the picture theory of proposition developed by Wittgenstein in the *Tractatus*. It is indeed an exercise in constructing a presuppositionless theory of proposition.

6. No definition is sacrosanct. On the nature of science there are so many definitions available. Under the circumstances, I think, the historico-descriptive approach is fruitful. For, instead of trying to give an oversimplified definition we get here a little elaborate description of the basic features of scientific activities and their outcome, both theoretical and practical.

7. Bacon's advice to the budding scientist to read the Book of Nature, though well-meaning, is somewhat misleading. For it overlooks the fact that the Book of Nature is basically a metaphor and that the writings of the book, without prior introduction and interpretation, are hardly intelligible.

8. The history of the modes of production, both economic and intellectual, is marked by increasing knowledge and specialisation. The said "increase" is not necessarily to be taken in a quantitative sense.

9. Knowledge by its very nature throws up problems. There is no system of knowledge which contains only solutions of problems, showing no mark of problem. The problematic frontiers of knowledge provide indication of the future direction of the development of knowledge.

10. Need is a complex phenomenon. It has both an "inside" and an "outside". It is not

merely the *object* needed. It also includes the *sense* of need which "draws" one to the object. The dialectic between the *object* and the *sense* is creative, i.e. grows, and is not repetitive.

11. To show intelligible and changing relations between the objects and senses of intellectual needs, influenced by and influencing practical needs, the "same" test is time and again re-interpreted in different contexts.

12. This view of science may appear a little extremist in its orientation, but some Marxists, influenced by praxiology, have defended it. Partly it indicates the impossibility of having a universally acceptable view of science.

13. This is an old view. Its elements can be found in the Advaita theory of the empirical world. In the modern Europe, Kant is the thinker who has formulated it very plausibly and attractively.

14. Once it is accepted that whatever man does bears the imprint of human nature and there is no exception to this rule, the thesis of complete de-humanisation of science is ontologically ruled out.

15. It is difficult to construct a satisfactory theory of the world, leaving man completely out of it. Even when the pre-human past of the world is theoretically pictured by the astronomer or the geologist, for example, the hidden human presupposition is there. It is only through reflection that one can gradually be conscious of this hidden presupposition.

16. Unless positivism is pressed to its untenable extremity, we cannot think of any history which is completely de-ideologised. If natural sciences cannot be totally de-humanised, it is difficult to imagine how history can be totally freed from the traces of ideology. See, in this connection, my book, *Sri Aurobindo and Karl Marx: Integral Sociology and Dialectical Sociology*, Delhi, Motilal Banarsidass, 1988. The concluding chapter, "Ideology and Utopia: A Critique" is relevant to the arguments I am developing here.

17. *Ibid.* "Possibility of Ideology: A Marxian Deconstruction".

18. Here I have in view the "Double Inversion Thesis" of Karl Marx developed in the *Capital*, Vol. III. Market forces of the capitalist system not only alienate and invert the ideological products of the society but also suppress this alienation and inversion.

19. This view of the history of science has been particularly defended by the transcendental phenomenologists like Husserl and his followers. In his earlier writings, Husserl was even unaware of the shortcomings of this approach. It seems that in the *Crisis of European Sciences and Transcendental Phenomenology* (Evanston, North-Western Press, 1970) he became conscious of the inadequacy of uncompromising transcendentalism.

20. For a defence of his view one might look into Ludwig Landgrebe's *Phenomenology of Edmund Husserl*, ed. and intr. by Don Welton, Ithaca, Cornell University Press, 1981. For a criticism of the view I find Paul Ricoeur's *History and Truth* (trans. and intr. by Charles A. Kelbley, Evanston, North-Western University Press, 1965) very interesting. For my own view on the subject, see the last chapter of my book, *Anthropology and Historiography of Science* (forthcoming).

21. D.P. Chattopadhyaya, *Individuals and Worlds: Essays in Anthropological Rationalism*, Delhi, Oxford University Press, 1976.

22. Both Hegel and Husserl were partly worried over the point. In their anxiety to keep science free from relativism and the remote possibility of scepticism, they felt strongly drawn towards transcendentalism.

23. If knowledge, essentially a human phenomenon, however objectively it may be construed and formulated, is stripped of all its humanness, there is left nothing very particular in it which one can be proud of. "Absoluteness" of knowledge is a highly idealised aim of science and it is never achievable.

24. Here I have in the back of my mind Tarski's 'Semantic Theory of Truth'. It seems to me that Karl Popper's *Objective Knowledge: An Evolutionary Approach* (Oxford, Clarendon Press, 1972, Chapter 9) and Donald Davidson's *Inquiries into Truth and Interpretation* (Oxford, Clarendon Press, 1984, Essay 5), ingenious efforts to salvage Tarski's view and to apply it to natural languages, have more or less failed.

25. One of the most heroic efforts to do away with the Theory of Types is to be found in the *Tractatus*. In his own way, Quine has also developed his view on the subject. W.V.O. Quine, *World and Object*, Cambridge, Mass. MIT Press, 1960.

26. On this question the views of Carnap, Reichenbach and Suppe are very noteworthy. For a critical re-appraisal see, for example, Frederic Suppe, *The Structure of Scientific Theories*, Urbana, University of Illinois Press, 1977.

27. In this connection, see, for example, K.C. Bhattacharyya's influential monograph, "The Subject as Freedom" in *Studies in Philosophy*, ed. by Gopinath Bhattacharyya, Delhi, Motilal Banarsidass, 1983.

28. This is the point I have indicated above under (24) and (25).

29. Transcendentalism is the anti-thesis of reductionism. It seems to me that a consistent view of reductionism cannot be worked out. Similarly, a "consistently" worked out transcendentalism turns out to be elegant but empty. See above (20).

30. G.W. Leibniz, *New Essays on Human Understanding*, abridged edition, tr. and ed. by Peter Remnant and Jonathan Bennett, Cambridge, Cambridge University Press, 1982, Chapter 9.

31. If the empirical is not accorded a compulsive character, capable of delivering a negative verdict, it leads to a sort of empty apriorism. The possibility of change or re-distribution of truth-values has to be kept open. The point has been persuasively argued, though in different ways, by Popper and Quine.

32. This distinction is important. Otherwise it is difficult to grasp the import of the neo-Platonic theory of propositions defended by thinkers like Bolzano, Frege and Popper. See, for example, D.P. Chattopadhyaya, "Bolzano and Frege: A Note on Ontology" in *Logic Ontology and Action*, eds. P. K. Sen and D. P. Chattopadhyaya, Delhi, Macmillan, 1979. ch. 12

33. That much of traditional epistemology has been assimilated by the contemporary philosophy of language is evident from such works as Mark Platts, ed., *Reference Truth and Reality: Essays in Philosophy of Language*, Routledge & Kegan Paul, 1980, and Peter A. French, et al. eds. *Contemporary Perspectives in the Philosophy of Language*, Minneapolis, University of Minnesota, 1981. Earlier we observed that in the continent of Europe epistemology has been largely assimilated under ontology as it is evident from the works of Heidegger and Sartre.

34. In this connection, I have in mind the work of Foucault, Derrida and Habermas. I have discussed their views elsewhere (20).

35. I mention this point because I do not propose to assimilate epistemology under sociology. For the question of validation is more open-ended than that of discovery.

36. The concept of regressive shift is due to Imre Lakatos. Before he worked it out in his subsequent publications like *The Methodology of Scientific Research Programmes* (1978) I had the privilege to listen him on the subject in the early sixties.

37. These twin traits of scientific theory are consistently highlighted by Karl Popper. But, I am afraid, he will not endorse the view as I have briefly delineated here.

38. The early positivists of the Vienna Circle accept the thesis of Wittgenstein without much examination. It is mainly due to Popper that the substantive nature of philosophical problems has been vindicated.

39. This point I have already referred to earlier under (16) above.

40. Here I am reiterating the point of importance, rather the compulsive import, of the empirical in the context of interpretation. Interpretation may be a dodging device or a justificationist strategy as distinguished from the critical one. I am trying to show that interpretations may be creative and critical and not defensive or "monster-barring" (again a Lakatosian expression) in their intention.

3

Epistemology Demythologised

VIEWS regarding the nature of the theories of knowledge have undergone continuous changes. With Berkeley and Hume it was "physiology of psychology".¹ Descartes² and Kant³ were primarily interested in the ways how objects are accurately *represented* in the private space of the human mind, how they acquire public acceptance, and in the *foundation* of knowledge.³ Wittgenstein and Heidegger are interested neither in representation nor in foundation of knowledge. Their primary concern is with language and how it is interwoven with life.⁴ It is not easy to decide whether Ryle, Sellars, Quine, Davidson, Putnam and Kuhn should be designated as philosophers of mind, or philosophers of language, or theorists of knowledge. A large part of what Carnap and Reichenbach used to designate as Philosophy of Science is now known as Theory of Knowledge, largely because of Popper and Ayer.

The examples cited above are intended only to show one simple point: expressions change but not necessarily the subject matters captured *in* and communicated *through* them.

The authors of the Vedas, Dante, Schiller, Coleridge and Tagore, among many others, were both poets and philosophers at the same time. In their cases, understandably, we do not raise the question of *logical* language and yet we do recognise that they had something very important "philosophical" things to say. In their case we are prepared to accept the rather unprofessional view that in the process of expounding the truth of life and reality they are free to make use of different figures of speech and even fictional entities.

But many of us are not prepared to take kindly to (a) Sellar's attack on the empiricist "myth of the given", (b) Quine's criticism of the two main dogmas of empiricism, (c) Davidson's disregard of the distinction between conceptual scheme and contents, and (d) the Kuhn-Feyerabend's denial of the paradigm-neutral meaning of any expression⁵. The underlying reasons may be various, e.g., vindication of "realism", "objectivity" of science, "continuity" of scientific progress, pro-essentialism, and anti-sociologism.

One may politely remind the essentialist and the realist that one can be scientific and realist without giving up the basic thesis of the sociology of knowledge and historical objectivity. C.P. Snow's *Two Cultures and the Scientific Revolution* (1959) exhibits a deep "schism in the soul" of modern men, in general, and of contemporary philosophers, in particular. We will be well-

advised to recall that Plato's philosophical realism and the literary style of the Dialogues, and the Vedic authors' poetry and science went perfectly together. The contemporary philosopher's resistance to recognise epistemology as grounded in social reality betrays a lack of historical sense and an uncritical acceptance of the temporary breakdown of communication between philosophy and other forms of culture as final and irreparable. This despair itself is rooted in the philosopher's alienation from the real life-situation around him, in the gradual realisation that he is no longer recognised as a super-arbiter in the debates between science and philosophy, between arts and society, and between *techné* and *epistémé*. He basks in the remembered sun of the days when Plato taught Syracuse III of Sicily, when Aristotle instructed Alexander the Great, and Agastya advised Rama how and why to kill Ravana. But today he is not being heard, still less followed, because of his notorious lack of familiarity with, and even interest in, other human disciplines. A candid Marx reminds him that the philosopher *qua* philosopher has nothing but to interpret *post facto* what others do and that if he wants to do something himself in order to be relevant to the society and change it, he must see that his ideas work.⁶

The philosopher's concern with questions, relating to the meaning of words, and to how the nexus of words succeed in picturing fact and become true are undoubtedly very important but unless, through discussion and action, he succeeds in showing how answers to such questions are vital not only to the changing career of philosophy itself but also to that of the society that ordinarily sustains it, his discipline is bound to be ignored. In order to be socially effective and rationally persuasive, he has to be a true learner; he has, in other words, to be intellectually non-provincial, to lower down his raised highbrows and give up the ultraprofessional stance.

II

Kuhn's incommensurability thesis (or a particular misinterpretation of it?) has of late come very handy to the realist-essentialist for proving his favourite thesis that some anarchists are out to degrade epistemology to sociology of knowledge.⁷ The following are the main steps of his argument:

- (1) Knowledge by definition is true or justified true belief (JTB)
- (2) Truth is *necessary* correspondence.
- (3) What is true or JTB in one situation or world is so in all situations or worlds.
- (4) Rejection of (3) entails (a) incommensurability of theories across the worlds, (b) non-availability of (i) world-invariant and (ii) theory-neutral terms designating singular objects and natural kinds.
- (5) The realist epistemologist must accept (3) and reject what its rejection entails. (4)

- (6) Given (3) possible world semantics, realism, commensurabilism and epistemology stand vindicated.
- (7) Situational Semantics, idealism, incommensurabilism and sociology of knowledge are inconsistent with (3) and, therefore, false and fall together.

Needless to add, the above schematic representation does not take note of some possible refinements of the enumerated steps. Even making due allowance for it, a proto-Kuhnian may offer the following critical remarks.

(1) (a) Knowledge is *not* true by definitions. Often truth-claiming hypotheses are provisionally accepted as true by convention or practical consensus. (b) Aristotle's essentialist theory of definition, assumed here, is neither unique nor sound. (c) Since what constitutes justification is itself an inconclusive issue, the character of the beliefs in question is basically psychological and not logical.

(2) (a) The modal notion of "necessity" itself is under attack from Wittgenstein and Quine, among others. The non-modal one is closely akin to "regularity".

(3) The theoretical load of (3) is immense, in effect almost unbearable. (a) It is impossible to conceive the structure and the details of all possible worlds and how they are firmly and permanently glued together. (b) Time is immaterial in the possible world semantics. To make a theory true in all possible worlds, identity of all the items of the worlds and their relations are somehow required to be preserved. (c) The epistemic items of the possible worlds are also required to be necessarily identical. (d) Given these strong requirements, the commensurability of theories may be achievable. But even then, the question remains whether the requirements need to be merely conceivable or, what is more important, also empirically satisfiable.

(4) (a) Again, one may certainly *talk about*, though one can hardly *refer to*, world-invariant and theory-neutral terms "designating" singular objects and natural kinds to defend realism but what one is called upon to investigate seriously into is *communication* and not, what the essentialist insists, *commensuration*. (b) Further it is not easy to identify and draw the line, if any, between "essential" and "accidental" properties which go in to the making of natural kinds. It is not, therefore, surprising to hear that the so-called natural kinds are at least partially unnatural. (c) Enough has been said critically on the problems bedevilling the proclaimed propriety, rigidity or vividness of the relation between singular referring expressions and their referents.

(5) To speak glibly of realism will not do. (a) From Meinong, Frege, Husserl and Russell to Wittgenstein, Popper, Quine and even Kuhn...all claim that they are realists. To defend one kind of realism, we need one (say, classical) kind of essentialism. For defending still another kind of realism, we need neither Aristotelian nor Lockean kind of essentialism. (b) There is no necessary relation between essentialism and realism. Kuhn is not unaware

of the metaphysical requirements necessary for explaining the *objectivity* and *continuity* of the history of science and also of the conditions making communication between different epochs of history or paradigms possible.

(6) (a) Every question and every presupposition is bound to come to an end as a matter of *practical* (as distinguished from theoretical) *necessity*. (b) Some verifiers, falsifiers, evidences and test-conditions, whatever they might be, are in fact *accepted* not so much for making communication possible as to explain the very *ground* of this possibility. (c) This question of acceptance or rejection is primarily a matter of cultural co-sharability and not of epistemology or of self-certifying intuitions. (d) Even if we start *apriori* with intuition with cognitive claims behind it, our resting ground, where scepticism *practically* comes to an end, turns out to be an area of cultural agreement.

(7) (a) Such pairing concepts as realism/idealism and commensurability/incommensurability are not as antithetical as the essentialist-realist tries to make them out to be. (b) One must first be clear about what sort of idealism or realism one is *talking about*. It will be seen in that case that many of us are talking at cross purposes, failing to understand clearly the other's point of view and supporting considerations.

(8) (a) In the debate between the epistemologist and the sociologist of knowledge what primarily is at stake is communication and not reference. (b) The effect of communication-breakdown is much more serious than that of reference-failure in the context of philosophising. The remedy of the latter is to be found in terms of the former and not the other way round. The cases of reference-failure can be successfully discussed only within the field of communication.

III

When C.P. Snow says that the greatest achievement of our century is science, he invites us to live by its method and adore it as the most important value. In contrast, Sartre and Heidegger tell us that the basic freedom of man, the most valuable heritage of man, must not be mortgaged to a particular model of knowledge and that we must preserve and exercise it so that the aims of better science and better life can be realised. While Kuhn approvingly refers to "normal science", he is not contesting Snow's admiration for "Scientific Revolution". In fact, the point he is trying to highlight is that *our* scientific revolution is one more historic episode in a series of crises and peaceful interludes which will never come to a permanent resting ground where truth will finally manifest itself under the aspect of eternity. Quite like other philosophers' views of science, Kuhn's "normal science" is also interested in justifying (justifying upto a point) its theories in terms of an observational language, its semantic rules, and some standard criteria of theory-choice—simplicity, precision and predictive power, etc. But if it is insisted upon by the proponents of different disciplinary matrixes that their criteria of theory-

choice must be treated at par with those advocated by physicists, the dialogue not only between artists and scientists but also between physical scientists and social scientists is likely to come to a point of breakdown. But, as a matter of fact, we find that people, grounded in different disciplinary matrixes and affiliated to different cultures, do communicate and interact with one another. This shows that in language, in writing and speech acts, we may make our presence felt to others. Our language, without which we cannot live, makes it impossible for us not to communicate and interact with others. This is a common point persuasively made out both by Heidegger and Derrida. The hide-and-seek game that we play, are rather obliged to play, not only among but also within, ourselves, artists and scientists alike, is a basic trait of the human situation. Even a panlogist like Hegel had to acknowledge the "cunning" game that Reason plays with itself. Before Hegel, Kant realised and told us that the criteria of scientific theory-choice would be of little or no use in the field of moral choice. All these examples illustrate one simple point: rules of one discipline cannot be accepted for all other disciplines. By insisting that his views and vocabulary are the most authentic and immortal, the epistemologist cuts himself and his discipline off from others, e.g., poets, mystics and literary critics who are equally authentic without being ensnared by any "immortal" language of their own.

In the name of realism, the epistemologist asks us to buy his view on truth as faithful representation. But he forgets that there are various other truths of which we are informed through means other than representations. Some truths present themselves so compellingly to us that without being unfair to our own experience, without being inauthentic, we cannot deny them. Our aesthetic and moral experiences are not "accurate representations" of any real object out there in the world yet they are judgeable and cannot be dismissed as purely emotive and of our own make. The epistemologist would object by saying, "Truth is peculiar to cognitive discourse; truth of non-cognitive modes of experience is merely metaphorical or analogical". Here he is clearly departing from our ordinary (language) uses of "truth" and simplicity, assuming that, like scientists, he as epistemologist has the right to legislate his own language. The realist epistemologist must free his mind of the prejudice that unless there is no object to correspond to his experience it can not be regarded as *rational*. Otherwise, the only life that could be called rational is the one lived according to accurate representations of reality having observable and, preferably, calculable properties. In the periods of "normal science", one can somehow (not without difficulties) manage to live according to this model of stifling rationality. But, if the realist's notion of rationality is correct, then during the critical periods of "revolutionary" science when the "accurate representations" become opaque and ambiguous, it is difficult, if not impossible, to live rationally. The realist's notion of rationality, in spite of Kant's ingenious attempt, fails to settle the claims of rationality presented by emotion, feeling and

will. More serious difficulties are presented by the Platonist's notion of rationality which is totally a-historical and, inspired by a vision of eternity, is unprepared even to put up with the modest demands of "normal science". Platonic ideas and Kantian categories meant to produce accurate representations for all people and for all time to come, are understandably not meant to be submitted to the short-lived scientific disciplines of this or that passing era.⁸

The epistemologist's main argument is borrowed from the realist-essentialist theory of reference. Proper names and indexical singular terms, the so-called rigid designators, are supposed to be the mainstay of their attack on Sociology of Knowledge. The phrase "rigid designator" coined by Kripke is being used at least in three different senses. (a) An expression is said to be a *rigid designator* if it designates the same thing with respect to every possible world in which that thing exists. (b) But we can easily think of a world in which a particular rigid designator exists but the "corresponding" thing does not exist. In this case, it has been suggested, rigid designator may be called *persistent designator*. (c) We may easily think of an expression which designates the same thing with respect not only to every possible world but also to every possible portion and period of the same. Such designators are christened as *obstinate designators*. A designator is strongly rigid in the Kripkean sense if it is both persistent and obstinate. Kaplan has persuasively argued that non-descriptive singular terms are obstinately rigid designators and that indexical and proper names are non-descriptive. Given this view, Locke could anticipate *truly* in 1689 that Kripke would develop his view on rigid designators in 1972. The only qualification necessary to make this view plausible is to admit that the name "Kripke" used in 1689 was not intended to name the present-day philosopher who did not exist at the time of Locke's anticipation regarding "him". Strictly speaking, to make this view really plausible the realist has to draw a distinction between a *semantical* notion of reference and an *historical* notion of reference. And he gladly does it. For otherwise, the notion not only of historical reference but also that of obstinate designator falls flat. Besides, the essentialist's whole enterprise is to construct a theory of reference in which space and time cannot work as principles of individuation.

The basic features of the argument for the non-descriptive or direct reference of general terms or common nouns is substantially the same as those for singular terms and proper names. If common nouns designate the natural kinds, then co-designated common nouns must be not only co-extensional but also co-intensional.

General terms like "gold" and "water" succeed in rigidly designating gold and water because of the proclaimed essential properties of the latter. If the proclaimed essential properties are to be proved *necessarily* (as distinguished from *contingently*) essential, then (a) their relation with the concerned natural kind will remain same for ever, (b) the boundary of the kinds will

also remain so, (c) cognitive non-availability of the essential properties will make no difference to (a) and (b), and, what is most desparate, (d) new empirical findings demanding change in hitherto recognised essential properties will introduce nothing unnatural in the life and boundary of natural kinds. In view of the said essentialist requirements, (a) to (d), the anti-essentialist critic might plausibly affirm: Since the essentialist metaphysics underlying rigid designation is not epistemologically answerable at all, it cannot be criticised in any way. An uncriticisable bad metaphysics need not be made the mainstay of a realist epistemology.

IV

The "debate" between epistemology and sociology of knowledge is another name of the on-going communication between philosophy of science and hermeneutics. Since the time of the Enlightenment, physics has been taken as the paradigm of knowledge and to which all other areas of cultures have to be measured up. Kuhn's studies in the history of science convinced him that within the natural sciences the debates between the contesting theories are primarily in the nature of *conversation* without being marked by any communication break-down. He particularly emphasises the point that the philosophers of science cannot construct an algorithm for choice among the contesting scientific theories. He used this point to show that if the practitioners of "hard" sciences can successfully communicate among themselves on their points of difference, then why we, the secondhand dealers of science, i.e., philosophers of science and epistemologists, should be unduly disturbed by Snow's thesis on the dichotomy of the two cultures highlighted by the charm circle of essentialism, cognitivism and scientism (in Hayek's sense). Kuhn himself is quite persuaded that historians of science, "consciously or not, are all practitioners of the hermeneutic method". As it is evident from their works, they know the relation between the Aristotelian and the Newtonian physics, between the astronomical paradigm of Ptolemy and that of Copernicus. The problems of "observational language", "co-ordinative principles", and "bridge laws" do not bother them. For unlike the highly-professional epistemologists of the day, their main concern is not commensurability but communication of continuity. For the question of commensurability does not arise at all between the groups of scientists whose paradigms of successful explanation are different, or who do not share the same disciplinary matrix, or both. However, Kuhn seems to have exceeded his brief when he claims that Aristotle's and Galileo's observations, for example, of swinging stones were so fundamentally different that they have to be understood in terms of a total *Gestalt* switch. The unintended upshot of these otherwise well-intended remarks was to make the epistemologist believe that, in effect, Kuhn was suggesting the possibility of a *Gestalt* switch over from realism to idealism. The critics of Kuhn, mostly drawn from among the logical empiri-

cists and the essentialists-realists, conveniently forget the difference between the nature of scientific paradigms and philosophical paradigms. While Kuhn is right in maintaining that to establish the Copernican paradigms one has to reject the Ptolemaic; the Kantian is wrong in suggesting that the only alternative to realistic paradigms of picturesque representation of reality is an idealist paradigm of the malleability of the pictured world. In other words, when one says that the same data may be differently totalised (organised), de-totalised (dis-organised), and re-totalised (re-organised), one is not committed either to a data-neutral language, a universal *mathesis* (of Leibniz's dream) or to the view that the said data are discontinuous, disjointed and discrete. This fancied dichotomy, "either/or", between the extremes is totally uncalled for, entirely rooted in *abstract philosophy of knowledge*, and alienated from what we do, see and normally practise.

Kuhn, Feyerabend and Toulmin are entirely justified in holding that within a scientific paradigm, experience, theory, methods and criteria stand interdependent and usually in an inextricable manner. It is wrong to think that observation can settle a choice between the competing paradigms. For even within the "normal science" observation enjoys no pre-eminent role. To settle the debate between the competing paradigms, we are practically obliged to make use of the external criteria, social and valuational considerations, which tend to make the paradigm-debates revolutionary. It is interesting to note that when paradigm-shifts take place in the history of politics, literature or even philosophy, we are not pursued by epistemologists to specify the criteria demarcating the paradigms and underlying their acceptance. Kuhn rightly points out that the criteria of choice between theories "function not as rules, which determine choice, but as values, which influence it". The epistemologist is wrong in drawing a sharp line of distinction between "rules of choice" and "values influencing the acceptance of rules". The point may be illustrated by reference to Cardinal Bellarmine's interpretation of the Copernican astronomy. While Galileo was clear that Copernicus' helio-centric hypothesis was descriptive and realistic, Bellarmine continued to maintain that it was 'illogical and un-scientific' and that the geo-centric scriptural description of the fabric of heaven was unquestionable. Except for such limited *practical purposes* as navigation in the high seas, Bellarmine found no truth-content in the Copernican hypothesis. What Bellarmine's view amounted to is to admit that at least within the limits of navigational and other practice-oriented celestial reckoning, the scientific requirements of accuracy, simplicity and predicative success were being satisfied. But, however, in respect of theory as a whole he continued to maintain that it was merely a heuristic device. In fact, Bellarmine was doing to Galileo what earlier Andreas Osiander had done to Copernicus himself. It may be recalled that on the Copernican revolution Osiander remarked that the helio-centric hypothesis did not offend "the liberal arts established long ago on a sound basis" or overthrow the geo-centric hypothesis into confusion. Osiander's

submission on behalf of Copernicus regarding the latter's theory was very modest"...these hypotheses need not be true not even probable. (They) provide (only) a calculus consistent with observations, that alone is enough." It is clear from the Bellarmine-Osiander approach to science that (a) it may be consistent with a finite set of observational data and yet (b) theories connecting them may be different, serving different theoretical as well as practical purposes.

What both Bellarmine and Osiander, on behalf of their masters, were trying to do is very interesting and relevant to our controversy between the sociological and the essentialist-realist interpretation of knowledge. Since the days of Cartesian dualism, reinforced by Kantianism, we have been nurturing the belief that there is a sharp distinction between science and religion, science and politics, science and art, and science and philosophy. This imported dualism of the European culture has influenced and obscured our understanding of the Indian cultural scene where this sort of dualism was never encouraged or defended. B.N. Seal tells us, and D.D. Kosambi endorses his view to a certain extent, that the philosophical system-builders of India were all positive scientists. Vātsyāyan was the author of both *Nyāya Sūtra* and *Kāma Sūtra*. Aestheticians like Abhinava Gupta and Ānandavardhana were first grade philosophers.

The final point I would like to emphasise is that science and epistemology were neither sharply separated nor should be separated from other cultural disciplines. The paradigm of cognitive enquiry should not be allowed to dominate other cultural paradigms. In the name of scientific realism, epistemology should not be encouraged to pilot a counter-revolution directed against a fruitful interaction and communication between scientific culture and humanistic culture.

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10. I am sorry, but not surprised, to note that the species of philosophers of broad cultural awareness as represented, for example, by Nelson Goodman, Stanley Cavell and Richard Rorty is gradually vanishing. It is, to my mind, symptomatic of the identity-crises of the professional Philosophy itself.

4

Reason: Sovereign Autonomous and Human

THIS chapter is partly expository and critical, and partly constructive. I shall try to show (1) that Leibniz's concept of reason is pre-critical, (2) that Kant's concept of reason, though critical, is not self-critical, and (3) that the concept of self-critical reason is superior to the other two concepts, i.e. (1) and (2).

The very concept of reason, to start with, is not free from ambiguity. It means, or at any rate may mean, several things, e.g. (a) argument, (b) motive or intention, (c) cause, (d) premise or justification, (e) an intellectual faculty and/or function of man, (f) intellect or intelligence personified (God), (g) sanity, and (h) sense. Certainly there are also other meanings of the concept. Among the enumerated meanings, the first four, (a) to (d), seem to be one sub-type and the second four, (e) to (h), of another. Each of the members of the first sub-type refers to something different, but the same cannot perhaps be said of any member of the second sub-type. Argument is argument—for or—against; motive motive-of; cause cause-of; and premise premise-of. By contrast, it may be pointed out that to understand the meaning of intellect or the intellectual faculty one need not refer to anything else. Some of the meanings of reason are found to be mutually incompatible. Many philosophers would refuse to regard (b) as (c), i.e. motive or intention as cause.

Insofar as the scope of this chapter is concerned, I shall be dealing mainly with (e) and (f). First, what is the structure of reason? Is it uniform or diaform or multiform? And assuming there are one or two other faculties of the mind, the question may be slightly reformulated as 'How does reason influence, or how is reason influenced, if at all, by understanding and sense-perception? It is generally believed that the possible answers to the question: 'What are the functions of reason?' depend upon the views one has regarding the structure of reason. This dependence has been construed by some philosophers precisely the other way round. Secondly, on the question of the personified (or embodied) character of reason, philosophers never agreed in the past, nor do they agree now. Some philosophers have found in the eternal and infinite God or Absolute the most perfect embodiment of reason; others have taken the temporal and finite human being as the paradigm example of reason. It has been said that reason is impersonal, and this again has been opposed by saying that reason is necessarily human

and personal. It seems to me that reason, essentially a human ability, is historical, incomplete, reflexive and open for ever. Careful analysis and faithful description of the structure and functions of reason clearly show that these human characteristics (functions) are indicative of the possibility of self-criticism of reason.

Of the various functions of reason, the two most important are analysis and synthesis. 'And of these two functions, which one is the basic?' and 'What is the relation between them?'—these are the most fundamental questions to which we have to address ourselves. But these questions are interlocked with some other structural questions viz., 'Can reason perform its synthetic functions entirely on its own?' and 'Can reason perform even its analytic functions entirely on its own?' These structural questions have obvious references to, or bearing upon, the relative roles of the *a priori* and the empirical not only in making knowledge possible but also in defining its scope. If it is thought that reason can play its *a priori* role without depending in the least on the empirical, in that the empirical owes all its structural properties to the *a priori*, or that reason in its pure (structural) form has no role other than the *a priori* to play, then the scope of knowledge is either defined very liberally or left undefined, i.e. undemarcated, letting the metaphysical, if not metaphysics itself, in.

Apart from their above *epistemological* formulations, the structural questions may be given another, i.e. *metaphysical*, formulation. It has been held, for example, that whether a specific function of reason is analytic or synthetic is to be decided with reference to a point of view, finite or infinite, and that it cannot be rationally decided in isolation from the rest of that (metaphysical) point of view. The analyticity or otherwise of a proposition expressing a specific function of reason in that case turns out to be a matter of point of view. In other words, one might say, whether a function of reason is analytic or not depends upon the *ability* (of the concerned point of view) *to mean*. Boundless ability to mean—boundlessness due to *a priori* activity of reason and structureless passivity (or 'blindness') of the empirical—is supposed to contribute necessity to what is synthesized by reason in its *a priori* capacity. When the abilities to mean and synthesize are believed to be bounded by the empirical, the resulting meanings are taken to be restrictively universal and the achieved syntheses remain open (to question) for ever.

Without appraising the *metaphysical* implications of the point of view, finite or infinite, personal or impersonal, which underlies the acts of analysis and synthesis, the concepts of analysis and synthesis cannot be adequately clarified. Such problems as the 'paradox of (meaningful) analysis' and the 'possibility of (open) synthesis' will remain not only insoluble but also unintelligible, unless the significance of the *epistemological* relativity of, or functional interdependence (i.e. intentional dialectic) between the *a priori* and the empirical is properly realized. This realization reflectively entails,

and is pre-reflectively entailed by, an inarticulate metaphysical standpoint or descriptive anthropology.

Any discussion about reason is bound to remain incomplete if the relation between its two major fields of application, i.e. theoretical and practical, remains unexplored. I also wonder why the role of reason in our appreciative or emotive modes of awareness is discussed, as is being done nowadays, in a very low key. Although I am aware of the difficulties involved in clarifying such concepts as moral reason and aesthetic reason in isolation from reason in general, i.e. as autonomous concepts, I find there are important considerations for which it would be unwise on our part to ignore the *peculiarities* of reason in its different (but not quite independent) applications.

For the analytic purpose, one might unduly narrow down one's scope of discussion about the structure(s) and function(s) of reason, but, drawn into discussion, one feels that it has obvious reference to the concept of man or person. Reason is paradigmatically human or personal, and impersonal reason is but an abstraction from it. The concepts of metaphysical reason, God for example, cannot be satisfactorily explicated except in terms of such root concepts as man or person, matter or body, and time. The Copernican revolution, although disowned in effect by its author himself, was a bold step forward to get at these root concepts.

The lay-out of my arguments (and, perhaps, expositions of others' views, too) has been influenced by what I call an adequate theory of reason, and the main aspects of that theory are indicated below in a schematic form.

A. Structure of Reason: (a) Logical and/or (b) Epistemological.

A1 Uniform: A1 (i) Sovereign Reason;

A2 Diaform: A2 (i) Reason and A2 (ii) Experience;

A3 Multiform: A3 (i) Sense-Experience, A3 (ii) Imagination, A3 (iii) Understanding, and A3 (iv) Pro-Transcendental Reason.

B. Function of Reason: (a) Logical and/or (b) Epistemological

B1 Synthesis: B1 (i) Synthesis by (or in terms of) A1—(a) Synthesis in Pure or Transcendental Reason; B1 (ii) Synthesis by (or in terms of) A2—(a) Synthesis in Reason (Pro-Empirical), and (b) Synthesis in Experience (Pro-Rational); B1 (iii) Synthesis by (or in terms of) A3—(a) Synthesis in Sense-Experience, (b) Synthesis in Imagination, (c) Synthesis in Understanding, and (d) Synthesis in Pro-Transcendental Reason

B2 Analysis: B2 (i) Analysis by (or in terms of) A1—(a) Analysis 'Purely' *a priori*; B2 (ii) Analysis by (or in terms of) A2—(a) Analysis Rational ('impure'), and (b) Analysis Empirical ('impure'); B2 (iii) Analysis by (or in terms of) A3—(a) Analysis in/by Sense-Perception, (b) Analysis in/by Imagination, (c) Analysis in/by Understanding, (d) Analysis in/by Pro-Transcendental Reason.

[Remark X. Distinction between B2 (i) (a), B2 (ii) (a) and B2 (iii) (d) is to be understood in terms of the *degree* of structural-functional autonomy of Reason. Structure A and function B of Reason, although conceptually distinguishable, are in *practice* inseparable.]

C. Structure of Reason: (a) Metaphysical and/or (b) Anthropological;
 C1 Infinite Point of View: C1 (i) Personal—(a) Theoretical, (b) Practical and (c) Artistic; C1 (ii) Impersonal—(a) Theoretical, (b) Practical, and (c) Artistic.

[Remark Y. Unless the inarticulate anthropological implications of C1 (i) (a), C1 (i) (b), C1 (i) (a), C1 (ii) (a), C1 (ii) (b), and C1 (ii) (c) are clearly understood, all these 'metaphysical' modes or structures (and sub-structures) will be given a *necessarian* interpretation.]

C2 Finite Point of View: C2 (i) Personal—(a) Theoretical, (b) Practical, and (c) Artistic; C2 (ii) Personal-Impersonal—(a) Theoretical, (b) Practical, and (c) Artistic.

[Remark Z. While the modes of C2 (i) are given a non-*necessarian* interpretation, those of C2 (ii) are generally found to be interpreted in a *pro-necessarian* way. The transcendental affiliation of the latter is almost universal.]

D. Function of Reason: (a) Metaphysical and/or (b) Anthropological;
 D1 Pre-Critical, D2 Critical, and D3 Self-Critical.

I do not claim to have succeeded in working out the details of an adequate *theory* of self-critical (anthropological) reasons, nor do I, being 'committed' as I am to the *primacy* (but *not* autonomy in the Kantian sense) of *practical reason*, think that it is possible for any person or human *being* (*in time*) to achieve a complete system (or synthesis) of reason which could be regarded as strictly universal and necessary. Whatever finite man achieves, or fails to achieve, bears the stamp of his finitude, but it seems that his achievements and failures are being always lightened and shadowed, regulated and influenced by more or less systematic ideas and ideals which partly transcend his personal finitude and historicity.

I: LEIBNIZ AND THE PARADOX OF SOVEREIGN REASON

Leibniz seems to have remained always unconvinced of the power of sense to set a limit to the sovereignty of reason. Nothing is without sufficient reason (SR). Even for contingent truths, not to speak of necessary ones, SR must be there. There are two kinds of truths—truths of reasoning and truths of fact, the former being based on the principle of contradiction and the latter on that of sufficient reason. By the principle of contradiction *we* judge a proposition involving a contradiction as false and that which is

opposed or contradictory to it as true. And by the principle of sufficient reason *we* understand that no proposition can be true and no fact or state of affairs can be real or can exist unless there is a sufficient reason for its being so. To say, as Leibniz does, that whatever is has sufficient reason for its being so rather than something else, is not to deny that in most cases these reasons cannot be known by *us*, i.e. finite human beings. By implication, Leibniz is committed to the notions of *unknown reason* and *unknowable reason*. And *reason* starts assuming a Platonic, i.e. pro-transcendental, character. For even if human beings fail to perceive the rationality of reason, of the sufficiency of the law of sufficient reason, that does not mean that there is anything intrinsically irrational in the world (or possible worlds) or that the law does not apply to the contingent propositions asserting actual existence. Rationality and the ground of all contingent things lie outside them, outside the terms of the *contingent* series—in the *necessary* being, i.e. in God. God is the unique source, necessary foundation, and sufficient reason of all particular things and beings.

While God's mind is the 'region of eternal truths', ours is that of contingent ones. True that Leibniz recognizes in principle the distinctions between (a) things and beings, (b) contingent and necessary, (c) existence and essence, (d) actual and possible, and (e) particular and universal, but, bearing his law of continuity in mind, it seems that he *systematically* smooths over and underrates these distinctions in practice. Kant's dualistic approach, (almost entirely?) indifferent to the rationale of the law of continuity and to each of these pairs of concepts, brings to light the interesting difference between the Kantian and the Leibnizian positions vis-a-vis reason. While Leibniz is overzealous in establishing the *sovereignty* of reason *over* sense, imagination and understanding, Kant is trying to defend the *autonomy* of reason *in relation to* (but *not* against) 'non-rational' faculties. The point may be clarified immediately by referring to Leibniz's views on (i) *beings* and *things*, and (ii) eternal truths and contingent truths. Beings, finite, created and embodied as they are, are subject to the limitations of finitude, creation and embodiment. The imperfections of beings distinguish them from God, whose mind is the 'region of eternal truths', and stand in their way of actualizing (even) the known possibilities. Perfection is divine, imperfection 'natural': all things and beings, including the human beings, are said to be limited by their own nature, i.e., their limitation is *not* due to God. The human mind is confined to the region of contingent truths. Between beings and things Leibniz, being committed as he is to the law of continuity, cannot draw a sharp line of demarcation.

And, then, it seems to me that the Leibnizian notion of sovereign reason involves a fatal paradox. This paradox may be put in two different, but not unrelated, ways—anthropological and epistemological. In respect of most of our actions, Leibniz thinks we are 'merely empiricists', i.e. we follow these actions only to the depth of *memory* or habit, and by *acts of reflection* do

not try to apprehend their sufficient reason or necessary truths. But Leibniz is persuaded that we, human beings, have 'reason' and the sciences in us---are capable of knowing necessary and eternal truths, and can 'raise us to knowledge of ourselves and God'. God is 'incapable of being limited', absolutely perfect, 'the source not only of existences but also of essences', and the only 'Necessary Being in whom essence involves existence, or in whom to be possible is itself to be actual'.¹ In contrast to God man is limited, imperfect, and in him the gap between existence and essence, actual and possible, is bound to remain ineliminable for ever. It is said, on the one hand, that (A) it is impossible for man to know God completely and on the other, that (B) there is nothing outside God existing independently of Him. If Leibniz's monadological pluralism is seriously intended, and I think it is, then these two propositions, (A) and (B), taken together, generate a paradox. Leibniz, or for that reason any other man, being limited and imperfect as he is, cannot know and mean what he says of God and of the world as a whole from God's point of view, usurping His position and under the aspect of eternity. Briefly, it cannot be held logically that autonomous man can be a usurper of sovereign God.²

This paradox may be given an epistemological interpretation as well. Instead of saying that our world-views, however abstract and metaphysical they might be, are bound to disclose, on radical reflection, their anthropological root (concepts), one might say, perhaps with equal plausibility, that since man is embodied, placed in the order of times and places, and subject to matter, motion and its laws, *his* knowledge of the World is restricted by a definite *perspective* and caused by confused perception or *materia prima*. Even if knowledge is *clear* and *adequate*, it cannot mirror what God's knowledge of the World as a whole is like.

It is in this anthropo-epistemological context that I intend to show the 'reality' of the paradox of sovereign reason. Professor Gurwitsch speaks of an *apparent* paradox in Leibnizianism, but I find the paradox very real and the reasons for considering it 'apparent' unsatisfactory and inconsistent with the very pluralistic spirit of Leibniz's philosophy. He formulates the paradox in the following way:

If the doctrine of the monads, especially in respect of their self-containment and self-sufficiency, is true, then it is unintelligible that one of the monads can establish the doctrine. The truth of the monadology, even its claim to truth, proves to be incompatible with the fact of its formulation by a finite monad.³

And I take this formulation as the weaker form of what I call the paradox of sovereign reason. Much of the force of the objection raised against this form of the paradox rests on the claim that each monad---here a spirit-monad---is 'self-contained and self-sufficient'. If we bear other relevant

views of Leibniz in mind, namely, that no monad is independent of the *monadus monadum*, i.e., God, and that every spirit being embodied, is subject to the influences of materiality,⁴ the notions of self-containedness and self-sufficiency and the paradox mainly based thereupon lose their weight. It is only having the weaker form of the paradox in view that Gurwitsch could claim that 'it is dissolved by considering the individual monád within the context of the system of monads and a member of that system'. But this way of dissolving the paradox, the transition from the autonomous monad to the sovereign monad, involves various difficulties, the most serious of which might be put thus: how from a definite point of view (or a re-view) of God's view (which presupposes, or has, *no* point of view) be possibly gathered and given? Those difficulties are indicative of the stronger form of the paradox, which, I believe, threatens the very foundation of Leibnizianism, a system of sovereign reason.

It seems that Leibniz was himself aware that this position might be assailed for a supposed—supposed, according to him—paradox. Although he speaks of the paradox in connection with his controversy with Arnauld over the interpretation of *praedictum inesse subjecto verae propositionis*, it has obvious reference to the problem under discussion.

Now what is meant by saying that a predicate is in a subject, except that the notion of the predicate is in some way included in the notion of the subject? And since from the time when I began to exist it was possible to say of me truly that this or that would happen to me, it must be acknowledged that these predicates were laws included in the subject, or in the complete notion of me which caused me to be called *I*, which is the foundation of the interconnection of all my different states, and which was perfectly known to God from all eternity.

It is true that the consequences of so evident a doctrine are paradoxical; but that is the fault of the philosophers, who do not follow up sufficiently the clearest.⁵

Leibniz's own suggestion for solving the paradox is interesting but not convincing. He thinks that the paradox is due to the fault of the philosophers who bring in the concepts of Divine knowledge and Divine will more than really called for, or necessary. We need not assert that God, while He decides to create Adam, for instance, sees in him (or has a *vision* of) everything that will happen to him; 'it is enough that we can always prove that there must be a complete notion of this Adam which contains them'. Every substance is said to have an infinite number of predicates. Not only does every substance have a predicate corresponding to every moment of time but also the state of a substance at each moment is analysable into an infinite number of predicates. This infinite complexity is indicative of the contingent, and the analysis of the contingent is to be distinguished from that of the necessary.

For while the latter comes to an end with unity ---the former could be carried on to infinity. As individuality implies infinity, it is impossible for us to have the knowledge of individuals and to determine exactly the individuality of any one of them. The principle of individuation of this or that thing could be grasped only by God who knows infinity ('through notions'). The difference between necessary and contingent truths is the same as that between rational numbers and surds.

Russell thinks that our paradox 'rests upon a confusion', i.e., upon the view that 'the contingent should be that which *we* cannot but [God can] perfectly understand'.⁶ The contingent is to be defined not only by existence but also infinite complexity (resulting from *temporality*), which accounts for its inaccessibility to exact human knowledge. We must not confuse the general character(s) of all contingents, actual and possible, with the meaning of contingency itself. Or, in other words, we must not overlook the distinction between eternal truths *about* the contingent, i.e. the necessary propositions about the *natures* of possible substances, and the contingent truth that such substances actually exist. It seems to me, as Russell concedes, that Leibniz himself may be held responsible for 'some confusion in the matter'. I would go so far as to say that this paradox is central to the very system of Leibniz and does not result from the said 'confusion' alone. Leibniz's confusion in this matter is, in fact, due to his indecisiveness (or lack of radical reflection) on the (pre-reflective) point of view wherefrom one is *obliged* to philosophize. In a different but not unrelated context, Russell's view seems to be in substantial agreement with ours. His suggestions, viz. that for avoiding Spinozistic necessarianism Leibniz should declare God's existence contingent, is a component of the negative part of our proposed solution of the paradox of sovereign reason.

Both things and beings, according to Leibniz, exist and operate through God, i.e., depending, *more or less*, upon Him. Of the (human) mind, he says, it is not only a mirror of the universe of created things, but also an image of the Deity...[and] imitates in its own sphere, and in the little world in which it is allowed to act, what God performs in the great world'.⁷ Man or, for that reason, every being or thing being more or less dependent upon God and subject to *materia prima* is obliged to 'imitate...in the little world... what God performs in the great world'. Mine or yours is *a* world and God's *the* world, and it is not easy to follow the transition from the former to the latter. To say, as it has been said by Leibniz, that different worlds are nothing but different perspectival representations of a single world from the different points of view is not very convincing either. For it could always be argued that dependent man cannot form in his mind a single unified and necessary idea of the world as a whole and, therefore, cannot be logically and definitely assured of the compossibility of all human perspectives of the world. Leibniz's neat---perhaps too neat---picture of the world is neither a true description of the world as it *is* (and/or possibly could

be) nor does it provide the root concepts in terms of which one could give a true description of the world. What the picture of the world is (or would be) like from God's end cannot be *conceived* by man. For forming a concept, man (unlike God?) needs some empirical correlate (or a given) which makes the application of the concept to an object possible. This is just a pro-Kantian way of reiterating the limit of *a priori* thinking.

As an indirect criticism of Leibniz one might ask: Are the truths about actual things genuinely contingent to God—as genuinely as they are to us? To answer the question in the affirmative would be to concede that God's knowledge of the world of things is imperfect, and it is certain that Leibniz would not like to make this concession. But by denying this position he would be inviting trouble for himself. For that commits him to the view that this actual world is the only possible world, and that means this world leaves no choice for God to make. In other words, Leibniz must choose one of these two alternatives, viz. (i) the actual things of the world are contingent to God, (ii) this world is the only possible world; but without being inconsistent with his system as a whole he cannot choose either. For, as I have already said, the first alternative means God is not all-knowing and perfect, i.e., He is somewhat like ourselves, and the second alternative suggests the limit of God's choice and that, too, is a human characteristic. These two alternatives taken together strongly suggest the human analogy (or 'origin') of the Divine and *not* the converse as advocated by Leibniz and many other philosophers. If this suggestion is accepted, and I do not see why it should not be, a solution of the paradox of sovereign reason could be found out.

However, the positive part of my view will be developed in section III of this chapter and before doing so I shall try to show in section II how Kant, well aware of the central difficulty of Leibniz's position, tries to remove it in terms of his "anthropocentric Copernican Revolution. When reason is abstracted from its anthropological locus and studied in theoretically defended abstraction, it tends to assume an uncritical and sovereign character. Since Leibniz is a very systematic thinker and the difficulty referred to before is central to his system, it has adversely affected the various doctrines of his system.

To illustrate this point I would draw the reader's attention to what one might call the paradox of contingent propositions, and which, incidentally, shows the untenability of the Leibnizian interpretation of *predictum inesse subjecto verae propositionis*. Every proposition is said to be ultimately reducible to subject-predicate form. The subject is defined by its predicates, and the difference between the subjects cannot be understood except in terms of their respective classes of predicates. But that again raises a difficulty: if, on the one hand, the numerical difference between the subjects does not somehow become intelligible prior to our having knowledge of their predicates, the difference between the classes of predicates (*qua* predicates)

remains unintelligible; and if, on the other hand, subjects are not defined by their predicates, the difference between the subjects (*qua* subjects) continues to remain unintelligible. The Principle of Sufficient Reason and the Identity of Indiscernibles, as used by Leibniz, do not allow him to recognize space and time as principles of individuation: there is no sufficient reason why God would arrange two indiscernibles in this way rather than *that*. Unable to devise a *purely* internal principle of individuation, he cannot logically defend the doctrine of the plurality of substances and is obliged to fall back upon the Spinozistic view of one substance. Impredicable substances are *meaningless*, unidentifiable and indiscernible. Now this makes the circle complete: individual monads must be numerically identified prior to predication, but it is only the predicates which make numerical identification possible. The circle could be broken by asserting either that individual substances are immediately and intuitively identifiable *without* any reference to 'their' predicates or that individual substances are somehow identical with the sum-total of their states. But neither of the alternatives, as we already know, is free from difficulties. As the paradox of contingent propositions is intimately connected with the second alternative, let us analyse it a bit further.

Every true proposition of the subject-predicate form is analytic and necessary, unless, of course, existence is asserted. All existential propositions, except the proposition asserting God's existence, are synthetic and contingent, i.e., 'there would be no contradiction if the subjects which actually do exist did not exist', as Russell puts it. If Adam is a class of states, i.e., predicates, one of which is the state of eating the forbidden fruit at t_1 , then to think that Adam might not have eaten the forbidden fruit at t_1 would be to think that Adam might not have been Adam. If the falsity of the proposition p , i.e. 'A has property F', involves contradiction, then p is necessary. In other words, on Leibniz's analysis, 'A' *means*, among other things, 'F', or 'F' is included among the definiens of 'A', and in either case what is being asserted is a mere truism. If 'A' *means* the properties 'only' up to t_1 , then one cannot know or deduce from the definition of 'A' what are (or will be) the properties of 'A' after t_1 . 'I know that p ' entails ' p is true', but that does not mean p is necessarily true, for a different outcome is not logically impossible. Leibniz argues to the effect that if 'I' is replaced by 'God' and 'know' by 'foreknows', the resulting proposition, 'God foreknows that p ' entails ' p is true', and ' p is true' entails ' p '. (Knowledge of false propositions is logically impossible.) It has been rightly pointed out by Pap that Leibniz's argument presupposes ' p ' itself is a necessary proposition, and that he is not justified in presupposing what he is required to prove.⁹ Necessity of ' p ' follows from the (very analysis of the) *meaning* of 'God', but ' p ', which is partly *constitutive* of the meaning of 'God', cannot be said to be a logical *consequence* of the latter. To deny the necessity of ' p ', Leibniz is required to admit that God's existence, like every other existence,

is contingent, but, for obvious reasons, he would not admit it. In Leibniz's theory, one and the same proposition is both (a) contingent and necessary (contingent from the human point of view and necessary from God's), and (b) synthetic and analytic (synthetic from the human and analytic from God's). And to defend this theory Leibniz is obliged to hold that there is only one proposition which asserts existence but is not contingent, and the proposition is about God's existence. His arguments¹⁰ on this point are full of inconsistencies and carry little conviction. As I intend to make a different point, a detailed examination of these inconsistencies need not detain me at this stage. But I would like to make a remark here about Leibniz's proof of God's existence from eternal truths. If it is said, as it has been by Leibniz, that the necessity of eternal truths is nothing else but the very nature of God, his own understanding, which furnishes rules to his wisdom and goodness, shows once again the queer Leibnizian way of proving by definition—proving God by defining Him in terms of eternal truths as his essences. Leibnizianism is pervaded by a pre-critical *essentialism*, which tries to save it from internal criticism but cannot conceal its central paradox.

The paradox of sovereign reason is found most clearly in Leibniz's theory of knowledge. He thinks that the best form of knowledge is there in mathematics, logical calculi, and metaphysics, for instance. The foundation of knowledge is *essentially* within man himself, and it is by reflecting on his own nature that he discovers or becomes aware of the (innate) ideas which lend themselves to deductive development and arrangement. The systems of *knowledge* are marked by their clearness, distinctness and adequacy. To know the external world, the windowless (human) monads do not, and in fact cannot, go out of themselves, and the certainty they have of the existence of the external world is only 'moral' and not demonstrative. Perception assures us of the external world, but perception is after all internal, and, therefore, the *diverse* character of the empirical world cannot but be caused by, and attributed to, the world that is perceived. But the attribution of causality to objects of perception to account for the diversity of the perceptual world proves inconsistent with the notions of self-containedness, self-sufficiency and windowlessness of the monads. Leibniz's theory of knowledge seems to move in between the views, (i) knowledge is caused by what is known, and (ii) knowledge is wholly uncaused, but is unmistakably inclined towards the latter. Paradox is generated when caused (i.e. existential) knowledge is completely subordinated to, and deduced from, uncaused (i.e. essential) knowledge. What *seems to be caused* (i.e. existential) to us is *essentially designed* by God; and in God, says Leibniz, essence and existence are eternally co-existence. And here arises, once again, the paradox-generating question: How can a windowless monad, Leibniz for example, subject to *materia prima* and *materia secunda* and being himself an existential, i.e. contingent, creature, rationally justify the view that in God's

(i.e. the Creator's) mind there is an eternal co-existence between essence and existence?

Leibniz's answer to the question is:

...We must say that God first created the soul, and every other real unity, in such a way that everything in it must spring from within itself, by a perfect *spontaneity* with regard to itself, and yet in a perfect *conformity* with things outside.

He thinks that in human minds there are 'special laws which set them above the revolutions of matter, by the very order God has introduced into them'. His belief that by inwardizing our consciousness, or gradually descending into the bottomless depth of our spontaneous self-consciousness, we could realize not only the pre-established harmony between all beings and things (including our own bodies) but also our partaking in the eternal truths *qua* God's understanding, seems to me very questionable. My question rests on three premises. First, Leibniz rejects space, time and motion, i.e. *material prima*—the source of finitude and plurality, as unreal. And to do it effectively, he downgrades perception as a source of knowledge. Secondly, he takes the analytic unity of the world in God as the best form of unity, and this unity is transcendental, universal and necessary. Even the highest form of unity (of things and beings) that man is capable of achieving is synthetic, temporal and fallible. Thirdly, Leibniz makes impermissible use of the laws of Sufficient Reason and continuity and, as a result of that, the autonomous and the critical role of the empirical is not duly recognized in Leibnizianism, and its pluralistic profession is persistently contradicted by a pro-Spinozistic and necessarian undertone.

II: KANT AND THE AUTONOMY OF REASON

It seems to me that Kant was quite aware of all the major defects of Leibniz's system, and if, in spite of Hume's influence upon him, he has failed to develop a theory of self-critical reason, it is partly because of his uncritical adherence to the Humean thesis that the empirical is formless, i.e. blind, and partly (perhaps mainly) because of his uncritical acceptance of the Leibnizian thesis that the empirical cannot negative the *a priori* or rational. Kant thinks that if, on the one hand, the empirical regarded as formless, empiricism can hardly avoid the sceptic misfortune, and if, on the other, the *a priori* and the empirical are thought to be *necessarily* and *continuously* connected, rationalism degenerates into dogmatism. In his bid to avoid the dogmatism of Leibniz, Kant carves out an autonomous (*structural*) sphere of reason and makes it *functionally* dependent upon the empirical in the broad sense. It is clear to Kant that the paradox of sovereign reason (or, what is its near equivalent for him, the antinomy of pure reason) is gene-

rated by the view that the sovereignty of reason is unlimited and this leads him to recognize the useful distinction between sensibility and understanding, on the one hand, and understanding and reason, on the other. The Kantian clue to the solution of the antinomies of pure reason, viz. 'that all possible speculative knowledge of reason is limited to mere objects of experience', anticipates the way of solving the paradox referred to before. To follow the implications of the clue it is to be studied against the background of Kant's Copernican, i.e. 'anthropocentric', orientation.

The absolute whole of quantity [the universe] , the whole of division, of derivation, of the condition of existence in general, with all questions as to whether it is brought about through finite synthesis or through a synthesis requiring infinite extension, have nothing to do with possible experience...Appearances demand explanation only so far as the conditions of their explanation are given in perception; but all that may ever be given in this way, when taken together in an *absolute whole*, is not itself a perception.¹²

Kant develops a theory of significance in terms of which such expressions as *absolute whole* and *infinite totality* appear to be without significance. And underlying this theory of significance there is an inarticulate anthropology, a theory of man, which Kant develops in the second *Critique*. The theory of significance is derived from the considerations connected with the application of the categories in ordering experience and the explanation of the necessary features of the understanding that make Nature possible. And these are also the considerations proffered in support of the 'Copernican Revolution' as the key to a reformed and scientific metaphysics.¹³ Out to defend the Newtonian physics—and to defend it rather uncritically—the sort of scientific metaphysics that Kant builds up is committed to a theory of knowledge in which the *a priori* concepts (unilaterally) dictate the (forms of the) empirical and the latter appear as a mere condition—of course a necessary one—for the application of the former. He is perhaps aware that this view amounts to a betrayal of the 'Copernican' spirit¹⁴, but he seems to be unaware of the way out of this difficulty within the scope of the first *Critique*, the critique of scientific reason, for he firmly believes that scientific reason, subject to the conditions of sensibility, space and time, knows no *spontaneity*, and that spontaneity is a characteristic peculiar to practical reason¹⁵. Admittedly, he concedes primacy to practical reason, a concession which has often been questioned on different grounds¹⁶, but he does not appear to have succeeded in proving that the scientist does not enjoy freedom in scientific activities and that moral reason is completely autonomous—free from the influence of (social) space and (historical) time. In other words, I hold that Kant's dualism is untenable, and I further hold that it is based upon a dualistic image of man, a hang-over of Cartesianism, which Leibniz

tried to remedy by the theory of Pre-established Harmony, and the Law of Continuity.

Reason for Kant is one, a unitary faculty; only its functions and employments are of different types, e.g., theoretical and practical. Therefore, it would not be correct to think that freedom has nothing to do with theoretical reason. Kant's refusal to co-ordinate theoretical and practical knowledge rests upon an ill-founded apprehension: he apprehends that were they co-ordinate, theoretical reason would prove totally indifferent to the practical order and might even encourage moral conflict and scepticism, and, *per contra*, were one subordinate to the other, the practical would then wholly comprehend the theoretical order within needs of its own¹⁷. The dialectic between knowledge and action is not recognized by Kant. Knowledge *qua* knowledge is said to be indifferent to its material contents: this indifference to (the forms of) scientific contents underlies Kant's view that scientific knowledge is universal and necessary. And he avoids the problem of moral conflict by defining morality exclusively in terms of necessary and universal form in total disregard of content. There is nothing in reason itself to justify the alleged primacy of practical reason over pure reason. Reason must be primarily studied in its anthropological context. The metaphysical paradigm of reason is man and *not* God. I do not deny the primacy of practical reason. My intention is far from that. In fact, I admit it. But the whole discussion of reason, its structure and functions, seems to me very abstract and useless, unless the human relevance of reason is realized at first. Reason is *primarily* an anthropological and historical concept; its secondary and tertiary (i.e., relatively abstract –relative to the point of 'origin') employments are to be found in metaphysics, science, and mathematics. Reason is neither sovereign nor even autonomous; it influences, and is influenced by, experience. The self-critical character of reason and phenomenological reflection on the structure(s) and function(s) of reason show its fallible (i.e. without having any rock-bottom basis) and human 'origin'. Man is at once an agent and a critic of his own thought and action, theoretical and practical¹⁸.

By reason (*Vernunft*) Kant means (i) the whole of the supreme faculty of knowing, and (ii) reason proper, which confers unity upon the materials already synthesized under the categories of understanding (*Verstehen*) and makes the highest unity of knowing possible. In a way Kant has been influenced by the medieval distinction between *ratio*, the discursive process of achieving knowledge, and *intellectus*, the ultimate achievement or possession of knowledge. But he lays emphasis elsewhere: while understanding unifies the sensible representations (passed through *first-level* individuation due to space and time), reason unifies the unifying forms employed to unify the sensible representations. Consequently, reason *qua* unifier of unifying principles (of the *second level*) cannot be realized, for there is no sensible representation to which it could be applied. Lack of direct application of reason

(of the *third level*) to the contents of the first level obliges Kant to take it as a *regulative idea* and deny its existence. Viewed from this end, Kant's concept of reason marks a definite improvement upon Leibniz's. And it is from this end that one is advised to try to understand Kant's celebrated criticism of Leibniz that he 'intellectualized appearances [i.e. sensible representations] ...[and] sensualized all concepts of the understanding, i.e. interpreted them as nothing more than empirical or abstracted concepts of reflection'¹⁹.

Let us look closely into Kant's criticisms of Leibniz. First, Kant thinks that unless we could determine by reflection the appropriate fields of application of concepts, a serious confusion ('amphiboly') is created. If to the objects of the senses the concepts of understanding are directly applied, ignoring the difference between the conditions of sensibility and those of understanding, the objects of sense are *thought* to be things in general, the sensible discernibles become conceptually indiscernible, and appearances are *mistaken* to be the representations of things-in-themselves. It is due to what Kant calls transcendental amphiboly that Leibniz extends his principle of the identity of indiscernibles, which is valid only of concepts of things in general, to cover also the objects of the senses, and believes that this extension has widened and deepened our knowledge of nature²⁰. 'The Law of the Identity of Indiscernibles, because of its alleged indifference to the forms of sensibility, space and time, is said to be 'no law of nature' but 'only an analytic rule for the comparison of things through mere concepts'.

Secondly, if the particular things of the world are recognized *directly* under concepts *and* as things in general, ignoring their sensible individuality, and all concepts are taken to be contained in the concept or mind of God (who exists), the very possibility of 'logical conflict' between the propositions asserting *realitatis phaenomena*—counter-acting forces, sufferings of people, etc.—is *a priori* ruled out. The world of Leibniz is extremely neat, free from all conflict, contradiction and negation; the price of this neatness proved rather high. Since every monad, i.e. substance, is concerned only with its inward representations, the community of substances and their reciprocal correspondence, according to universal laws, are sought to be explained in terms of the principle of pre-established harmony. For Leibniz, space is a certain order in the community of sub-space, and time, according to him, is the *intelligible form* of the connection of *things in themselves*. Kant's complaint is that it is by confounding the forms of sensibility with those of intelligibility that he fails to take note of the difference between the discernibles and, on insufficient ground, tries to establish their *essential* identity.

The principle of the identity of indiscernibles is really based on the pre-supposition that, if a certain distinction is not found in the concept of a thing in general, it is also not to be found in the things themselves, and consequently that all things which are not distinguishable from one an-

other in their concepts [in quality or quantity] are completely identical (*numero eadem*).

Once again, the weakness of this doctrine has been brought to light by Strawson²¹ in a way which reminds one of Kant's criticism of what I call the Leibnizian principle of (spatio-temporal) indifference. According to Leibniz, the basic individuals of the system, monads, are identifiable or describable purely in terms of concepts, i.e. without demonstratives. It is theoretically possible to specify a type of purely general description in such a way that no more than one monad could answer that type of description, but, Leibniz admits, no one except God can actually give any such description. The principle of (spatio-temporal) indifference makes it impossible for Leibniz to identify the unique individual to whom a general description is meaningless. Strawson would say that such a description could be regarded meaningful only if we are ready to accept the Platonic theory of meaning. Demonstratives are said to be essential devices for making references in the spatio-temporal world. Disembodied consciousness, Leibniz's monads for example, are, therefore, unidentifiable and cannot be referred to.

Finally, Kant fears that Leibniz's theory of knowledge demands of us that we should be able to know things, and therefore to intuit them, without senses, and therefore that we should have a faculty of knowledge altogether different from the human, ... in other words, that we should be not men but beings of whom we are unable to say whether they are even possible, much less how they are constituted.²²

Kant extensively revises Leibniz's view of man. While Leibniz thinks that man is 'not only a mirror of the universe of created beings, but also an image of the Deity', Kant is convinced that man carrying as he is the legacy of having a body, subject to the laws of extension and duration, cannot directly unveil the ontological mystery of the world as a whole. Admittedly, the objects of the senses exhibit a sort of unity and objectivity but its ultimate source is 'secret' and 'concealed' even from man himself. The transcendental ground of objective unity is, according to Leibniz, gradually discoverable through reflection, but, according to Kant, it is *undiscoverable*, though undeniable. Man cannot know even himself except through inner sense, i.e. as a mere appearance. It is impossible for man to know that God is the sufficient reason and necessary ground of the unity of the empirical world; all that he can say without overstepping the bounds of sense is: that this unity 'be viewed in accordance with the principles of a systematic unity—as if [it has] its source in one single all-embracing being'. Kant warns that we have no reason to think this unity *constitutive* in character. Regulated by the idea of God, man cannot know what the constitutive character of God would be like. This is another way of indicating the autonomy of human reason. Subject to the influences of body *and* the influences to which the body itself in its turn is subject, man, essentially an embodied person, occupies a position

in the world, and 'because' of his socio-historical individuation, is not free to know the *total* unity of the world or 'reproduce', in himself, the analytic unity of it that is there in the mind of God (as Leibniz would have us believe).

Kant's critique of Leibniz is very instructive but not thorough-going. The theory of sovereign reason needs, not modification, but total elimination. Most of the defects of the Kantian system are due to its uncritical affiliation to classical rationalism. One of these central defects seems to me very fundamental, and this defect, I think, explains why Kant's critical rationalism could not develop into self-critical rationalism. My point is: Kant's doctrine of triple synthesis betrays unmistakably the closedness, i.e. near-dogmatic character, of his system.

By synthesis Kant means 'the act of putting different representations together, and of grasping what is manifold [be it given empirically or *a priori*] in them in one [act of] knowledge'. Synthesis in general is said to be due to imagination: 'a blind function of soul', but how exactly imagination performs this task is scarcely known to us. What is synthesized by imagination is brought to concepts by the understanding. Above all, it must be borne in mind that 'all our knowledge is...finally subject to time...[all our representations are] ordered, connected and brought into relation [in time] . Unity of the manifold of intuition and the representation of the manifold *qua* manifold are to be understood in terms of the *synthesis of apprehension*. This synthesis is inseparably bound up with the *synthesis of reproduction in imagination*, which is transcendental and *a priori*; that is to say, imagination can intuit even without the presence of the object. While reproductive imagination can bring to the mind a past empirical intuition, productive imagination can 'exhibit' or create intuition (*exhibitio originaria*) without actual experience. Imagination moves concepts to the data, while Schematism moves from the end of the data to concepts, and the latter movement is possible only in time, which imparts a definite structure to the data. Imagination gives *applicability* to the concepts, and time gives *subsumability* to the data. All reproductions in the series of representations turn out to be useless if they could not be conceptually reidentified in consciousness. Knowledge is not possible without concept, however obscure or inarticulate its function might be. The object of the senses could not be elevated to the level of the object of knowledge or thought proper unless it is recognised first in concept. *The synthesis of recognition in concept* is for Kant absolutely necessary for conferring both *unity* and *objectivity* upon what is given in intuition. Sensibility is passive and depends upon stimuli from without, but thinking is active and spontaneous. These two 'partners' in the joint venture called cognition differ in their structure, i.e. forms, and the difference could be found in the direction of the relation between the particular and the universal in the respective domains of sensibility and understanding. Understanding being essentially a conceptualizing activity presupposes the particular as a primary datum, while intuition ac-

cords primacy to the universal and arrives at the particular through determination of the former. We will see how this account of the relation between the particular and the universal encourages uncritical rationalism. But before that, I would like to add a few remarks about the transcendental unity of apperception; these, I hope, will bring out the weakness of Kant's arguments to prove the foundational unity of the different functions of reason which, rightly analysed, show the plausibility of the pro-realistic and pro-historicist interpretations of some of the central doctrines of Kant.

To have an *objective* reference, Kant maintains, particular representations should exhibit or possess a certain unity or connectedness among themselves. The representations synthesized (i.e. *perceived*) in sensibility and (*associated* in) imagination are objectively grounded in *the unity of apperception*, which accounts for their homogeneity, variety, affinity, and *continuity* (continuity in regard to their *graduated* forms).²³ Unless all my representations accompany 'I think', something would be represented in me without being thought of or owned by me. The possibility of empirical self-ascription of *diverse* representations is grounded in the *identity* of *transcendental* self-consciousness *expressed* either in the *activity* of synthesizing or in the *power* of doing so.²⁴ The supreme principle of synthetic unity of apperception

says no more than that all *my* representations in any given intuition must be subject to that condition under which alone I can ascribe them to the identical self as my representations, and so can comprehend them as synthetically combined in one apperception through the general expression 'I think'.

Sensibility and understanding, the two stems of human knowledge, 'spring from a common but unknown root'.

This idea of 'unknown root' is open to numerous objections. The 'abiding self' of transcendental apperception does not satisfy the Kantian requirements for 'a possible experience' or the possibility of self-ascription of experiences (of objects). For the possibility of self-ascription requires that there be some determinate intuition enabling us to realize the significance of the concept of a subject of experience or, to put the same thing in a different way, there must be empirically applicable criteria for identifying a subject of experience. Unless it is recognized that the 'abiding self' is embodied—body being datable and locatable—the Kantian requirements for 'a possible experience' remain unsatisfied. This argument may be further strengthened in terms of Kant's own general theory of (meaningful) experience. Kant holds, and we agree, that experience requires both particular intuitions and general concepts. Particular items of experience, in Kant's own view, cannot be recognized as instances of general kinds unless all those items could somehow be referred or ascribed to an 'abiding self' or identical subject. This recognitive ability of self underlies the possibility of experience, and this

ability prevents the self from being included in the bundle of sensations or even submerged in the stream of consciousness. What makes 'a series of discrete items of intuition' possible cannot be a term of that very series. Experience, for Kant, is never a datum or *pure* given.²⁵ Here we are in agreement with Kant. But to prevent the self's absorption into the items of experience as data, Kant goes to the other extreme and is obliged to maintain that *unruly* representation is illusory or that there cannot be any item (or factor) of an object (or a fact) which somehow exists independently and cannot be connected with the rest of the object and referred to the synthetic unity of apperception as a part of that object. So in respect of the unREFERRED part of an object the recognitive ability of self proves of no consequence, and, therefore, an object to that partially unREFERRED extent, is not 'a possible experience'. Apart from the anti-realistic implications of the argument (rather the interpretation of the argument) I am alluding to an implicit circularity underlying the meaning of the expression 'a possible experience': possibility presupposes *referability* of the *object* (of possible experience) to the *subject*, and the latter for its meaning (or identification) requires *application* to the former (even though it might remain partially *impossible*!). Knowledge was for the classical rationalist the turn of the self *from* the given, but for Kant it is the return of the self *to* the *impure* given—an impurity due to the *transcendental self* (with which Kant's preoccupation seems to be uncritical).

I am definitely opposed to Kant's doctrine of transcendental synthesis (or unity of apperception). I do not deny the necessity of some such concept for saving the self from 'absorption into the sensible accusatives', to use Strawson's expression, but I feel that the way in which Kant makes use of the central concept commits his philosophy to a sort of *transcendental subjectivism*, which, although in some respects an improvement on the empirical idealism of Hume, leans too heavily on Leibnizianism in order to get rid of scepticism. Kant has developed a perceptive but 'under-labourer' (i.e. uncritical) concept of philosophy. His theory of knowledge betrays *anti-realism* and *anti-historicalism* as two related characteristics of *uncritical rationalism*. It is true that in terms of Kant's doctrine of transcendental synthesis alone all these *criticizable* features of Kant's system cannot be satisfactorily accounted for, but it is the single most important doctrine that has transformed critical philosophy into a nearly closed system.

Overimpressed by Newtonian physics, Kant raised an under-labourer's uncritical question, viz., 'How are synthetic judgements *a priori* possible?' while the critical philosopher's question ought to have been 'Are synthetic judgements *a priori* possible?' An uncritical question invites an uncritical answer. Kant's theory of scientific knowledge elaborately designed to *justify* the accepted science of the time has achieved two objects: first, positively speaking, it has carved out a near-autonomous domain for scientific reason, and, secondly, negatively speaking, it has vindicated the autonomy of moral

reason. To achieve these two objects together, particularly the former, Kant has departed from classical rationalism, i.e. given up the sovereignty thesis of reason. Consequently, it has been rightly observed by Riehl that the *Critique of Pure Reason* denies metaphysics but affirms the *metaphysical*. The transcendental unity of apperception, rightly rejected by Ernst Cassirer, constitutes the main pillar of that *metaphysical* (i.e. transcendental) idealism, and it is upon this dispensable doctrine that the anti-realism and anti-historicalism of Kant mainly hinge. The ultimate unifying principle presupposed by all knowledge is somehow *in*, and to be understood by, the process of knowledge but *not* exhausted by or reducible to it. The primordial contact between knowledge and object cannot antedate knowledge, and to assume such contact would be to assume a fact prior to knowledge. Transcendental synthesis essential to an intellectual act, which is undated and non-empirical, and cannot, therefore, encounter the temporal data awaiting to be synthesized, is 'desperately unpromising', as Bennett puts it. The solution of this difficulty could be found if we agreed to drop the 'genetic' interpretation of transcendental synthesis²⁶ and accepted what Cassirer would call an *immanent* (roughly corresponding to Bennett's 'analytic') interpretation of the synthesis. Transcendental synthesis cannot be sharply demarcated from empirical synthesis; it is to be understood as (i) the inexhaustible continuity, (ii) endless reflexivity or regressive character, and (iii) intentionality of the latter.

Free from its transcendental adjunct, Kant's critical philosophy assumes pro-realist, pro-historical and self-critical characteristics. According to Kant, we can never know the objects *as they really are*, but only by conceptualizing the affections of sensibility due to them. Objects *qua* objects do not exist independently of our knowledge of them, but from this we cannot say, argues Kant, that objects have no *real* correlates. Kant finds in the human mind those transcendental and *a priori* abilities which make not only Newtonian Nature possible but also keep it above empirical criticism. Kant first internalizes the whole structure of the world of experience, adds something more to it, and then proves that mind is the maker of Nature. It is not clear how Kant co-ordinates the different levels of cognitive functions. How, for instance, do the sensible representations, as punctuated by time and space, prove *necessarily* subsumable under, or conformable to, forms or concepts of thinking? How in an a-temporal transcendental synthesis are temporal elements incorporated, ordered and *transformed* into an object? An 'unruly' or 'nonconformist' perception is never recognised by Kant as an indication of the existence of another objective world, but is lightly dismissed as a subjective illusion. He does so under the uncritical assumption that an unruly or non-conformist object (or part thereof) cannot have any rule/bye-rule or form/sub-form of its own. This assumption of Kant is incompatible with both common sense and scientific practice. The concepts and theories of science are being continuously revised, and made

more and more precise in the light of new findings and structures thereof. The structures of the objective world are *infinitely* complex and cannot be determined merely by reflecting on the mechanisms of knowing. In other words, the manifold (or materials) of synthesis are not *really* blind or formless; they have their own form(s), which *may* prove incompatible with the forms of knowing. This incompatibility is a pointer to realism (not to be confused with Kant's empirical realism²⁷). When the doctrine of transcendental synthesis is withdrawn, Kant's notions of affinity, continuity and homogeneity, developed presumably under the influence of the Leibnizian theses of continuity and preformation, lose most of their force, and Kant's description of the workings of the human mind appears to be incorrect.

The anti-historical element in Kant's thought may be briefly explained in this way. Every system of thought formulated in language uses certain principles of classification or, to put it in a different way, frames some hypotheses to *discover* and describe the objective structure (and sub-structures) of the elements in reality. We cannot enumerate or find out with finality all those principles or hypotheses. Any genetic inquiry into the 'origin' of these principles or hypotheses is bound to fail, for the validity of knowledge is not established by tracing its 'origin' but by trying to disestablish it in and through *application*, i.e. by applying (hypothetical) knowledge to doubtful or marginal cases. Language is an everchanging human institution; the changing forms of human knowledge find their primary expressions in ordinary language, which is continuously (though imperceptibly) produced and used by human beings. It is not primarily *through* but *in* language that we express ourselves. The conditions of using language are among the fundamental conditions of identification of objects in the world. It is true that the changing history of the human mind lies deep in language, but Strawson is mistaken in thinking, following Kant, that the conceptual infrastructure of ordinary language is unhistorical:

certainly concepts do change...certainly...metaphysics has been largely concerned with changes...but it would be a great blunder to think of metaphysics only in this historical style. For there is a massive central core of human thinking which has no history²⁸.

One might say that Strawson's descriptive metaphysics, the positive part of his criticism of historical metaphysics, is an incorrect statement of the fact that it is possible to describe the conditions of description in highly general terms and thus keep that meta-description above the level of change and historical criticism. No serious metaphysician, certainly not Collingwood to whom Strawson refers by name, has committed the blunder of thinking of metaphysics *only* in a historical style. As against Kant, Collingwood²⁹ rightly maintains that the 'absolute presuppositions' of philosophy are only historically and *not* transcendently absolute. In this respect

Hampshire's approach seems to me more insightful and constructive. Hampshire has taken time seriously not only in the sphere of science but also in that of morals. In spite of their categorical forms, both scientific propositions and moral proposals are provisional and questionable. The poverty of autonomous reason becomes evident from its antihistorical character: in pure reason, the spatiality and the temporality of the manifold are completely lost in the transcendental synthesis: in order to avoid what Kant calls empirical heteronomy or the fallacy of anthropologism, i.e. relativism, (social) space and (historical) time are completely excluded from practical reason. Kant's system of critical philosophy is thus static and nearly closed: it is open only at the transcendental end,³⁰ and this has proved more harmful than beneficial for the system.

III : HUMAN REASON AND ITS FALLIBILITY

Finite man cannot achieve infinite success. The relevance of man to whatever he thinks and does is to be borne in mind always. It is to the School of Marburg (represented by Hermann Cohen, Paul Natorp and Ernst Cassirer) that we owe the anthropo-centric interpretation of Kant's Copernican Revolution. Reason is neither sovereign as claimed by Leibniz nor even autonomous as suggested by Kant, but essentially, one might say existentially, human. Reason is the most influential human capacity of synthesis and analysis. Synthesis presupposes analysis and the distinction between the two, in the ultimate (i.e. anthropological) analysis (including the analysis of meaning), breaks down³¹. Human capacity is limited—the limit is set both by the world wherein I live and by the individuals among whom I live. What sets limits to my thought and action also enables me to identify myself and to change my identity in history without destroying its recognizability or re-identifiability. Man is individuated in space and time and it is primarily in terms, or from the point of view, of human individuality that other individual objects (including subjects of experience) are identified, re-identified, ordered and understood. It is true that I can order the objects of the world in an *endless* number of ways, but that does *not* mean I can order them in *every* way I like. This suggests, among other things, that individual objects of the world are independently ordered—independently of their being perceived or thought by us. This assertion results from our reflection upon what is given to us in perception. One might point out that in comparison with the objects of thought, those of desire and feeling, for example, can be ordered and re-ordered at ease, but even at the levels of action and artistic appreciation or creation one is well advised to remember that there is a limit to human freedom. The limit to human freedom, as an argument in support of realism, may be understood from two different but related ends: consciousness is object-ward, i.e., limited by its object, and unable to get to its own zero-point. I can neither ostensibly

define an object nor can I uniquely identify myself. My self-identification(s) and other identification(s) are relative primarily to myself and then to the rest of the world. Neither the world as a *completed totality* nor myself as a *whole* am ever given to me. The *unity* of the world is neither in Leibniz's 'existential' God nor in Kant's 'ideal' God; it is in the continuous process of *unification* of human thought and action. Formal or conceptual unity is to be replaced by the living process of unification, transcendental synthesis by empirical synthesis. The process of unification is not to be dictated either from above, i.e., by transcendental concepts, or from below, i.e. by 'blind' sensations. Since knowledge, including metaphysical knowledge, is an object-ward process and the objects are individuated in space and time, our main concern is with empirical synthesis.

Empirical synthesis is always ultimately open—open to the objects yet to be discovered, and, therefore, criticizable. The concepts and principles which make empirical synthesis possible are themselves not immune from criticism; they are criticizable at a different level. Transcendental synthesis in the Kantian sense is hardly open to criticism, while, according to us, being contained within the reflective depth of empirical synthesis, it cannot escape the varying fortunes of the latter. There is no dividing line between the forms of sensibility and those of thinking: space and time are not peculiar to the former, nor spontaneity to the latter. The spatio-temporal situation of man and the orientation of his body can never take away all his spontaneity. He continuously exceeds his own existence and whatever is given to him from without. In a way his productive imagination informs him of what is intended by the different modes of the given. Transcendental synthesis is influenced by (though it is *not* a unilateral product of) productive imagination, and, therefore, it has to be corrected by the given, and in its turn is again impure. The impurity of the given is to be understood in terms of its possible relevance to (what is anticipated by productive imagination in) transcendental synthesis (or unity), on the one hand, and its object-wardness or intentionality, on the other. My view that the doctrine of transcendental *unity* is to be replaced by that of transcendental *unification* is prompted by two related considerations: first, *human* intention is not necessarily fulfilled or, in other words, object-wardness gives no guarantee that the object could ever be completely grasped; and secondly, productive imagination cannot produce an object—not even an artistic one—*entirely* on its own and it has to be fed somehow by empirical synthesis. Both these considerations are indicative of the finitude and fallibility of man.

Metaphysics, be it revisionary or descriptive, influences and is influenced by science. The critical dialogue between the two breaks down if the former is interpreted as transcendental unity in the mind of God (Leibniz) or *as-if* in the mind of God (Kant). Metaphysic of experience to be true to its name must get close and faithful to experience, and remain engaged in settling its accounts with experience; this is what I mean by the process of unification. At this stage the clarification of the Kantian concept of 'a possible experience'

is called for to free it from its implicit circularity and establish its realistic implication. Settling his metaphysical accounts with Newtonian physics Kant thought that his achievement would prove final and definitive. Strawson's defence of Kant against Korner's 'historical' criticism, viz. that the Kantian concepts of space and time are to be replaced in the light of new findings, should be rejected. No serious thinker maintains that modern theories of science and the development of non-Aristotelian logical systems and non-Euclidean geometrical systems have totally overthrown Kant's *metaphysic* of experience. But it would be very uncritical to hold that the metaphysic of experience remains unchanged in spite of all new changes that are being introduced in different branches of science, for this amounts to admitting that we have nothing to learn from experience. Reason continuously regulates experience, but experience at times, refusing to conform to the forms of reason, influences and modifies the latter. This seems to me to be a correct description of the workings of the human mind.

NOTES AND REFERENCES

1. See *Monadology* (1711), 45; see also paras 27-36 and 57.
2. See Ch. I.
3. Aron Gurwitsch, 'An Apparent Paradox in Leibnizianism', in *Social Research*, Vol. 33, No. 1, p. 52.
4. *Die philosophischen Schriften von G.W. Leibniz*, herausgegeben von G. J. Gerhardt, Berlin, 1875-90 (VI. 172). Quoted in Bertrand Russell, *A Critical Exposition of the Philosophy of Leibniz*, 1949, p. 147. See also Leibniz's confession (*ibid.*, II. 232—Russell, p. 187) that 'his assertion of many substances is rather arbitrary'.
5. *Leibniz, Philosophical Writings*, Everyman's Library, p. 167. See also R. L. Saw, *Leibniz* (Pelican), Ch. 8.
6. Bertrand Russell, *A Critical Exposition of the Philosophy of Leibniz*, p. 61. See also p. 39.
7. See *Principles of Nature and of Grace, Founded on Reason* (1714), sec. 14.
8. See (1) above, sec. 57 and also (2).
9. Arthur Pap, *Semantics and Necessary Truth*, pp. 20-1.
10. See (6), pp. 284-90.
11. See (6), 'The New System', p. 105. See also p. 100.
12. *Critique of Pure Reason* (tr. N. Kemp Smith), A483/B511 and B512/A484.
13. P. F. Strawson, *The Bounds of Sense: An Essay on Kant's Critique of Pure Reason*, p. 22.
14. See Ch. III.
15. See (12), F446, F476, B561, and B567. See also Nathan Rotenstreich, *Experience and Its Systematization: Studies in Kant*, pp. 111-31.
16. G. J. Warnock, 'The Primacy of Practical Reason' in *Studies in the Philosophy of Thought and Action*, edited by P. F. Strawson, O.U.P., 1968. See also (13), p. 272.
17. *Critique of Practical Reason* (tr. T. K. Abbott), p. 218.
18. Stuart Hampshire, *Thought and Action*, pp. 231-40.
19. See (12), p. 283. For different meanings of reason see *The Critique of Judgement* (tr. Meredith), First Part, p. 242 and Second Part, p. 177.
20. See (12), A270-72/B326-8.
21. P. F. Strawson, *Individuals*, Ch. 4.
22. See (12), A278/B334.

23. Ibid., A116, A122, and A658/F686.

24. Ibid., A108, B134; see also B138, and A15/B29.

25. See (13), Part Two, II, 6 & 7 and Jonathan Bennett, *Kant's Analytic*, Chs. 8 & 9.

See also (12) A339-344/B397-402.

26. See (12), B125-6.

27. Ibid., A370-4.

28. See (21), p. 10. See also (13), pp. 118-21.

29. R.G. Collingwood, *An Essay in Metaphysics*.

30. See (12), A566/B594.

31. See Ch. VI.

32. S. Körner, *Kant* (Pelican), Ch. 4.

5

Copernicus Betrayed

I

I SHALL try to show, in a general way, (i) that Kant's Copernican Revolution has been betrayed, among others, by Kant himself, (ii) perverted by logical constructionists, and (iii) that its fundamental aim is yet to be realized. (iv) Finally, I shall try to indicate the lines along which it may be realized.

II

Kant rejects the assumption that our cognition must conform to objects, for he thinks this assumption is responsible for the sterility of all hitherto existing systems of *a priori* metaphysics, and intends to make an experiment with the reverse assumption that objects must conform to our cognition, and not vice versa; he hopes, thereby, to achieve a major breakthrough. He likens his proposed experiment to what Copernicus did in his explanation of the celestial movements. When the latter realized that the assumption that the celestial bodies revolve round the spectator would not pay, he started working with the reverse assumption, i.e., the spectator revolves and the celestial bodies are at rest. If intuition must conform to the nature of objects, we cannot, possibly know anything of them *a priori*, and if, *per contra*, the object conforms to the nature of the human faculty of intuition, we can easily conceive the possibility of such *a priori* knowledge. But the conformity of the object to intuition by itself is not sufficient to remove Kant's doubt. To be regarded as cognition, intuition must refer to the object and itself determine it. Now if it is assumed in this connection that the conceptions, which are necessary to make the said determination possible, conform to the objects, then, Kant argues, we will be repeating the 'pre-Copernican' blunder. In this situation, the only assumption that he felt justified to share is: objects (i.e. experience) conform to conceptions. Experience itself is presumed to be a mode of cognition and the possibility of the objects being given *a priori* presupposes 'laws of understanding which are expressed in conceptions *a priori*'. Kant concludes confidently, 'to these conceptions all the objects of experience must necessarily conform'.

Had Kant been a bit less self-confident and more self-critical, he would have seen that the necessary conformity of the objects to conceptions is pre-established. If the objective experience is defined in the very terms of conformity to intuitions and conceptions, there is nothing surprising in the necessary and universal (i.e. *a priori*) harmony between intuition and conception, on the one hand, and the objects, on the other. Since objects cannot be anything other than what these are allowed to be by the forms of intuition and conceptions, there is no special reason for jubilation over the 'revolutionary discovery' that Nature knows no accidents in it. This only shows that the Copernican Revolution was bloodless indeed. And the debt of blood had to be paid by the thinkers of the later generations.

Kant was right in insisting that Reason must interrogate Nature like a judge 'who compels the witnesses to reply to those questions which he himself thinks fit to propose', but wrong in presuming (a) that whenever Nature does not directly answer its questions, it is of no use in understanding Nature and (b) that most of its questions themselves depend upon, or are influenced by, the answers which Nature returns to Reason. Reason might err both in formulating its questions and also in understanding the implications of the answers returned by Nature. Of Galileo, Torricelli and Stahl, Kant says that 'they learned that reason only perceives that which produces after its own design'. But he did not adequately realize the important truth that scientists also learn from what baffles their designs. And he was definitely wrong in believing that reason seeks for and requires only what can be united under one or other necessary law and has nothing to do with 'accidental' observations made according to no preconceived plan. One must remember that Nature can dispose much of what we propose. Nature is not exactly what Understanding takes it to be. To talk of making Nature possible (by understanding) is, perhaps, presumptuous.

When I say all this, I do not intend to detract in the least from the underlying greatness of the Copernican Revolution. My only complaint is that the deep humanism which underlay and inspired the Revolution has remained by and large unrealized. And for this, Kant himself is to be held primarily responsible. Of course, others followed him in different ways later on.

What Man is and has are not entirely due to Nature. And Kant is right in holding that Man must not be understood in terms of Nature. He is also right in holding that what Man can know (Epistemology), should do (Ethics), and hope (Religion) are all determined finally by what he is (Anthropology). To *human* reason Kant gives the pride of place—the central position—'in' the world. In Kant's system the position of human Reason is *above* the world not *in* it and is not a part of it. Kant would endorse Pope's thesis that 'the proper study of mankind is man', but he is concerned only with human Reason and not Existence as a whole.

Even those who argue that Kant's main concern was practical (and not pure) Reason, may be reminded that even there he was indifferent to everything irrational, however human that might be. Let us look into the issue a little more closely. Man, according to Kant, is essentially rational. Much depends upon what we mean by *essentially*. For everything irrational may be ignored on the plea that it is not *really* human. The function of the term *really* thus becomes analogous to that of the term *essentially*. (This explains, at least in part, the language-philosopher's concern with the use of words and also the existentialist's impatience over the essentialist's retreat in the face of all genuine problems.) It has to be admitted that Kant was not an essentialist in any ordinary sense, and this is patent in his eagerness to contain metaphysics within the bounds of experience. His main difficulties lay elsewhere.

Unlike his other two great predecessors, Descartes and Leibniz, Kant was not a scientist on his own. It is true that he had first-hand knowledge of science and mathematics, but he was greatly impressed, perhaps overwhelmed, by Newtonian physics. And it did not occur to him at all that one might question and overthrow it one day. So as a philosopher, he felt that his main task was to answer the question: How does scientific knowledge become unquestionable? In fact, Kant was the continuer of Locke's under-labourer concept of philosophy. And his famous question, 'How are synthetic judgements *a priori* possible (in Physics)?' is nothing but a technical re-phrasing of the simple question formulated above. Kant was quite confident that synthetic judgements *a priori* are possible in Physics. This confidence, one alleges, is uncritical, and one wonders how the critical philosopher could start philosophizing from such an uncritical presupposition and reconcile himself with the rather timid task of justifying (and not criticizing) this presupposition.

Secondly, Kant assumed that like natural experience moral experience is also universal and necessary, i.e. objective, and that its objectivity consists in its conformity to, or accordance with, certain Law(s). The morality of an action, according to Kant, is determined neither by the desires and purposes of the doer nor by its consequences. The alleged irrelevance of the doer's desires and purposes in determining the moral worth of this or that doer's action makes one wonder if Kant's ethical inquiry was concerned with historical human beings of flesh and blood or with an imaginary Rational Man who alone 'can will that his maxim should become a universal law'. It is true that Kant makes allowance for human desires and feelings, but only to the extent that these are consistent with, and do not try to influence, the Moral Law. This demand for consistency with (an anti-historical) Moral Law designed by (non-human) autonomous will of (an imaginary) Rational Man is unfair to the facts of life and seems to be inspired by an impatience over the fallible nature of human beings. It is true that Kant admitted the finiteness of man and the necessity of placing him under a

command. The unhistorical character of the Kantian command suggests that the command under which the finite man is to be placed is not of his own making. Kant was candid enough to admit that he hates anthropologism (i.e. relativism) in morals, for it might open the flood-gates of scepticism. But this admission does little good to the reputation of Kant who made the bold claim that Hume had roused him from dogmatic slumbers and that he was the first (anthropo-centric) Copernican Revolutionary. Anthro-po-centricity in philosophy (of science) and denunciation of anthropologism in morals can go together only under the assumption that the Ideal Anthropos did not, does not, and will not exist historically. Historical existence implies uniqueness of the historical (person) and this is what Kant precisely intends to deny him in the fear that it might feed his hedonistic ego and lead him to glorify his personal likes and dislikes as ethical principles.

I would not say that Kant was entirely wrong in his fear; perhaps he was not, but what I disapprove of him is that he was not ready to take the risk—the risk involved in allowing the historical person to decide for himself in his own social milieu what is to be done and how, to fight for his own decisions, and to change them, if necessary, in the light of experience and judgement. Since, in Kant's system, 'the light of experience' (both natural and moral) is necessarily pre-judged, the Rational Man can and does never come across any light unthought-of-before, and from which he can learn anything. It is only in this artificially closed texture of experience that the possibility of every new experience is ruled out *a priori*. And it is in terms of this very *a priori* ruling that the scope of *possible experience* is defined or, one might say, sealed. That this definition or scaling of the border of possible experience is anthropocentric is hardly comforting to historical persons who do not see in it anything peculiar. Kant's moral work is theoretically immaculate but practically poor, and is of little help to those who do need help. I am not for pragmatic vulgarization of ethics, nor am I for unhistorical and non-human divination of ethics just to keep it above the unclean touch of those who fall short of the model Rational Man. What man should do must depend upon, as Kant himself very rightly says, what he is. What he *should* do depends upon what he *can* do, upon what he *is*. In other words, duty depends upon ability and ability upon existence.

Kant's betrayal of the Copernican Revolution is to be understood in terms of his theory of Man. His theory of Man is anti-historical. Kant's Rational Man is not ready to face the consequences of what he is. His Rational Man is Universal Man and not individuated by space and time. Kant expounds his theory of categorical imperative, having such a literally utopian Man in view. Whatever is 'imperative' for real human beings is 'conditioned' by his body, and by the social customs and tradition. His understanding intervenes in between his actions and the conditions of those actions. Man acts according to the logic of his situation—the logic as he

understands it. In his situation, besides his own time, place and ideas, other times, other places, other persons and their ideas also enter *via* his understanding (and *mis*understanding). No man is free enough to create his situation entirely on his own. Every man finds himself placed in a given situation. By his thought and action he can, of course, influence and, to that limited extent, create his situation. To be moral in the Kantian sense, one must be completely autonomous, i.e. a free creator of one's moral law and moral world. When the Rational Man acts entirely on his own, i.e. without being influenced by anything external to his reason, he acts objectively, i.e., on behalf of all rational beings and can will that the principle of his action should become universal law. Thus the objectivity of the Moral Law is secured by allowing the Rational Man to be its author, and rationality is secured for Man by keeping him unhistorical and unsocial.

I do not deny that to organize our experience we do use *a priori* concepts. In fact, all significant experiences are conceptualized and this process of conceptualization is, I agree with Kant, spontaneous. Human experience is necessarily concept-oriented, but the outcome of this orientation cannot be definitely pre-viewed. In other words, the *a priori* concepts or principles that we employ in synthesizing and setting a limit to possible experience may turn out to be inadequate. We must remain prepared to anticipate unforeseen consequences of our factual knowledge. Synthetic judgements *a priori* are possible but, I would add, not necessarily valid.

This sounds strange to some modern disciples of Plato and Locke. The judgements which are synthetic and *a priori*, must, they argue, be necessarily valid; if some supposed synthetic *a priori* judgements turn out to be 'invalid', it is to be presumed either that they were synthetic but not *a priori*, or that they were *a priori* merely in the sense of stipulation or convention but not synthetic. The faith underlying the argument is transparent: it is impossible that a necessary statement will not hold good in all cases (or worlds). This alleged impossibility of infirmation of any necessary statement in any possible world carries little conviction to the self-critical rationalist, for he points out, much to the chagrin of the essentialist, that since the very possibility of the worlds is defined by some fundamental synthetic *a priori* statements or laws of thought from which all other (less fundamental) necessary statements are derivable, the confirmation of any of the latter, then, in any of those worlds is spurious. In order to determine the truth of the uninterpreted formula in some system, 'It is impossible both p and non-p', its constituent symbols have to be carefully interpreted first. Let us suppose 'p' stands for any proposition', and assign ordinary meanings to other expressions of the formula; the formula then expresses the principle of impossibility. But how to identify propositions? Either we have to identify them in some way other than the requirement that anything is a proposition which satisfies the formula, or we have to admit that there is no way of identifying them at all. If we adopt the first alternative, we can never be empirically certain that

the formula holds good for all propositions. For the evidence in support of the formula, which is somewhat like an empirical conjecture, is bound to be incomplete. If we adopt the second alternative and admit that anything is a proposition which satisfies the formula, the admission then is offered as an implicit definition of what a proposition is. The principle of impossibility becomes a necessary truth in that case only because nothing can be a proposition which does not conform to it. I can well imagine what will be the essentialist's rejoinder to this dilemmatic argument. He will say: necessary truths are intuitive, and are determinable neither empirically nor by implicit definition.

The essentialist's last contention, I agree, is irrefutable, but this irrefutability does not stand to his credit. It is irrefutable because of its systematic ambiguity. Such terms as *possibility* and *necessity* are systematically bedevilled by ambiguity. From this oversimplified discussion of synthetic *a priori* necessity, I draw one general lesson: synthetic *a priori* statements may be regarded as strictly necessary only under the assumptions (i) that what is synthesized is created by the synthesizer, (ii) that the principles of synthesis and those of creation are essentially the same, and (iii) that the creator-synthesizer can commit no mistake. Kant's Rational Man is this creator-synthesizer, the perfect analogy of God on earth. He unifies everything that he can lay his hands upon, and *regulates* what he cannot *constitute*. But the totality of all that he constitutes and regulates, forms (rather seems to form) a unity for no other reason than that he (i.e. the self) thinks so. Kant's creator-regulator self is transformed into Hegel's creator-self,—the former's critical Idealism into the latter's Absolute Idealism. But in either case, the self is free—free *from* everything irrational, and the complete rationality of its world as a whole is the inverted reflection of its own nature. In fairness to Kant, it has to be admitted that to secure the secular dignity of Man he emphasizes the concept of freedom-*from* (from both what lies beyond him, i.e. God and Nature), while Hegel continues to be mainly concerned with the elaboration of the concept of freedom-*to* (to God). Kant seems to be keenly aware of the theoretical difficulties involved in fitting such transcendental concepts as God and the Immortality of the Soul into an otherwise critico-empirical framework. So the unity that he cannot achieve by theoretical reason is sought to be achieved by practical reason—by willing and hoping. That the desired unity of the difference between pure and practical reason cannot be so easily achieved was obvious to Kant. He concedes that 'all the ambitious attempts of (pure) reason to penetrate beyond the limits of experience end in disappointment', and yet comfort himself with the idea that 'there is still enough left to satisfy us in a practical point of view'.¹ Kant's intellectual sobriety is replaced by Hegel's robust optimism. Hegel finds much to his delight that there is (objective) reason of every act of human hoping and willing. Even the 'irrational' passions of man are said to be due to the Cunning of Reason. So where Kant stops, Hegel rushes. Kant is convinced that Man, being what

he is, cannot completely resolve the theory-practice dualism, but Hegel asserts with his characteristic confidence: 'While the Theoretical and the Practical Idea each involves an ever unfulfilled endeavour—whether to explain the given exhaustively, or to transform it practically—the Absolute Idea surmounts both by the simple expedient of bringing them together, so that the provocation and compliance which the world yields to our practical endeavours, becomes also the last theoretical truth about it'.² What is to be noted is this: even Hegel is unable to unify theory and practice at the *human* level. Their dualism is surmounted only by the Absolute Idea. It is true that 'in theory' Kant relativized Man to his world, but 'in practice', having emphasized the concept of freedom-*from*, he enabled him (i.e. Man) to be independent of his world (both historical and natural) and thus to approximate to the 'Absolute'. Pointing his finger to the concept of freedom-*to*, Hegel asserts with unwavering consistency that Man must pass through the successive stages of historical evolution and must realize some distinct (but essentially the same) spiritual truths in each of these stages only to be ushered, and ultimately to 'vanish', into the realm of the Absolute Spirit. Hegel is unmistakably a glorifier of God and of those who represent Him on the earth. Kant intends to uphold the dignity of man and his freedom-*from* whatever is non-human or inhuman. Hegel's Man is sure to be redeemed by God, but the redemption of Kant's Man is secured for him by making him (rather making him believe that he is) free from the world wherein he is historically stationed.

III

Neither Kant nor Hegel thought deeply about the practical aspect of the concept of the freedom-*in*, which, I believe, could help them in tackling some of their most obdurate problems about Man in the world.

Man's position of pride in the world (of knowledge) was threatened immediately after Kant's death when, much to the dismay of the Kantians, a Non-Euclidean system of Geometry was constructed by Lobachevsky (1826). Even before Lobachevsky, Gauss visualized the possibility of construction of a Non-Euclidean system of Geometry. Bolyai also independently developed a Non-Euclidean system. Riemann precisely formulated his *Hypotheses Underlying Geometry* in 1854 (but did not publish it until 1868). It is true that the Non-Euclidean geometries by themselves do not prove either the impossibility of geometrical intuition or the inconsistency of any one of the proposed systems. And Felix Klein showed as early as in 1879 that the theorems of Non-Euclidean geometries can be proved within the Euclidean system and that 'they share the same fate in respect of truth'. Klein's conclusion was further strengthened by Hilbert's rigorous proof that the theorems of the different geometrical systems are not only provable in one another but also reflected

in the purely analytical theory of real numbers so that every contradiction in any system must also appear in this theory.

The admirers of Kant ought not to have thought that the philosophical implication of the Non-Euclidean geometries would prove very frustrating for their epistemologies. Those who like Lotze and Wundt thought that the different systems of geometry entail different kinds of space and, therefore, different worlds were unnecessarily apprehensive. The point has been very persuasively argued by Cassirer, a great admirer of Kant. Following Hankel, and particularly Klein, he seems to reject the alleged universality of the Euclidean system and hold that all systems, given their axioms, are 'equally true and equally necessary'. To quote Cassirer on this point:

geometry is a pure science of relations which has to do not with the ascertaining of objects and their characteristics, substances and their properties, but with orders of ideas alone. The question, too, about the unity of space can therefore be posed only in this sense, that it concerns not the substantial but the formal or 'ideal' unity.³

For us, what is of particular interest to note is Cassirer's endorsement of Klein's view that intuition as such is not enough for the purpose of construction of geometrical systems, for it is 'essentially inexact' and that its inexactitude is to be gradually removed by constant revision and 'idealization'. The question of revision and idealization arises only when we go from pure geometry to physical geometry, when we try to describe the physical world in terms of the principles of a particular system of geometry. Considered in abstraction and in terms of the consistency of its axiom set, Euclidean geometry is as 'true' and 'necessary' as any other non-Euclidean system. And I agree with the Kneales when they say that 'the development of Non-Euclidean geometry does not, as some philosophers have supposed, disprove the old view of Euclid and Kant'.⁴ However, it would be rash to conclude from this 'that physical space is Euclidean in the sense of satisfying all Euclid's axioms'. Whether physical space is Euclidean, Lobachevskian, Riemannian or something else is an open 'empirical' question. Given Newtonian physics only, the Euclidean system seems, as it did to Kant, to be 'true'. This seeming 'truth' turned out to be 'false' or (what is perhaps a more appropriate term) inexact with the discovery of the Einsteinian physics, which seems to accord more concretely and adequately with the Riemannian system. On the basis of our present knowledge of physics and geometry, we cannot rule out *a priori* the possibility of (a) construction of geometrical systems which will accord still better with the Einsteinian physics, (b) discovery of new systems of physics with which none of the existing systems of geometry will accord well, and (c) construction of new geometrical systems appropriate for description in detail of the structural properties and relations of new systems of physics (yet to be discovered).

The simple point that I intend to emphasize here is: we have no infallible spatial intuition. The man-geometrician is no less fallible than the man-physicist. Vico said that creation cannot be more *certain* than the creator himself is. To some it might smack of psychologism, but I find a rare insight in this utterance of the Neapolitan philosopher. Without knowing what man *is* we cannot ascertain what he *can* know. Kant had started on the right track, but then, haunted by the Humean ghost of psychologism and scepticism, deviated. His 'understanding' of Hume *via* Beattie was, to say the least, not unquestionable. It only confirmed his rationalist pre-view: scepticism is a pernicious creed and it must be fought. He arrogated to himself the impossible task of building an 'infallible' philosophical structure on the fallible human basis. Mathematical knowledge, in Kant's words, 'is always certain and indisputable, because reason is employed *in concreto*—but at the same time *a priori*—that is, in pure, and therefore, infallible intuition, and thus all causes of illusion and error are excluded'.⁵ The price of infallibility is rather high, i.e. sterility. It requires reason to be purged of all awkward historical contents. Progress in mathematics, as in other disciplines of knowledge, has been, and continues to be, possible through trial-and-error. He who doubts it may be advised to go with an open mind through any authoritative history of mathematics. To err is human and infallibility divine.

I think Kant is right in holding that every rational human being must have a *conceptus cosmicus* of his own. He must have it so that he can *act* morally and *be* himself moral. Kant failed to realize that man, however rational he might be, cannot grasp the world all at once. Its truth is discovered by him gradually—historically. Moral Philosophy is said to be 'the ultimate end of all the operations of the mind' and Natural Philosophy a 'subordinate... means for its attainment'. Metaphysics seeks to unify the two—the principles of *action* and those of *cognition*. 'The principles (of Moral Philosophy) which determine and necessitate *a priori* all action' are not, and cannot be, 'based upon anthropological or other empirical considerations'.⁶ Here, again, Kant's anti-historicalism is clearly evident. He wrongly thinks that all historical data (*cognitio ex datis*) may be neatly roped in by rational principles (*cognitio ex principiis*).

I think that the data of historical or descriptive anthropology do often clash with Kant's contention on this point. A dispassionate analysis will show the basic principles of human action are not alike everywhere. Some maxims of actions followed in some societies, both primitive and modern, are not consistent with Kant's categorical imperative. Neo-Kantians rightly observe that Kant ignored the *contentual* diversity of morals merely to defend his abstract formal consistency. Diversity of morals raises a very serious philosophical problem for those who think like Kant that the Rational Man has only one principle (or one set of principles) of action to follow—the set of principles that follows from his own Rational Nature. In itself the formulation might not appear very objectionable, but a little probing

would reveal that its underlying theoretical import is hardly defensible. The Rational Man is his own law-maker, but, it is said, that the Moral Law he makes for himself is made on behalf of, and therefore must be acceptable to, and binding upon, all rational men. Given the diverse and incompatible sets of principles of action, how one is to clinch the issue of rationality once for all? The demonstration of the universal unity of practical reason is very difficult, if not impossible, *in concreto*. Of late this important problem has drawn the critical attention of some philosophers like Macbeath and Gellner and anthropologists like Radin and Leach. I have discussed the problem elsewhere.⁷

The problem raised by the *ideal unity* of the Moral Law of the Rational Man and the actual or *historical diversity* of the *practised principles* of action may be, and in fact have been, tackled, broadly speaking, in two different ways. First, it has been said that if the Moral Law or Laws of different societies are found to be inconsistent, it is to be presumed either that the supposed moral laws are not really moral or that the concerned people or peoples are not really rational. Secondly, it may be said either as an elaboration of the first view or quite independently *of it* that the historical diversity of morals is a proof of, and preparation towards, the ideal unity of morals. Although unintended, the first view follows from Kant's general position. It has been directly expounded by some positivist anthropologists like Levy-Bruhl, who are confident enough to assert that the mentality of primitive peoples is pre-logical. The second position may be attributed to Hegelians, if, of course, it is regarded as a development of the first position. Otherwise one may count Comte as its exponent. But in Comte's scheme of thought the limit to diversity is set by the Law of Three Stages. The Hegelian system seems to be very comprehensive in this respect. In spite of his positivism, Comte is interested more in establishing 'fixed and unchangeable' orders in all events, human and natural, than in describing the empirical details. He believes that there is a definite logical passage from 'particular facts' to 'general facts' and that the latter is not a mere aggregation of the former. Comte is also believed to have definitely anticipated the logical positivist's theory of meaning without committing himself to a sort of logical atomism. But my main interest in Comte's thought is due to his insistence on the unity of rational or 'normative' man notwithstanding the diversity of 'positive' facts. This neat and partly deceptive image of 'normative' man results from his steadfast adherence to the execution of the programme of construction of a neat *conceptus cosmicus*. Kant's Rational Man and Comte's Positive Man are close analogues of God. For Kant, God is the supreme *regulation*; and for Comte, God is the supreme *construction*. And in either case, the humanity of Man is said to consist in acting unto that *unique regulation* and approximating to that *unique construction*. The spirit common to Critical Philosophy and Positive Philosophy is the spirit of system-construction around the concept of Man. In Comte's own words:

In the final analysis one should think only of one single science: the science of man, or, more exactly expressed, social science of which our own existence constitutes at once the principle and the purpose and in which the rational study of the external world naturally comes to merge, for this double reason that the science of nature is a necessary constitution of and a basic preamble to social science.

This marks the beginning of a significant change in the history of ideas. Kant's half-regulative and half-constitutive system loosely held together by, and awkwardly suspended from, a tenuous thread of "as-if" teleology was transformed into two opposite directions. Hegel started developing a fully constitutive system in the idealist direction and Comte in the positivist. But neither of them allowed Man to return to his true self which is not completely rational or completely positive. The accent was always on the 'ideal' man and not on the 'real' man. And this was a distinct Kantian legacy developed in different directions by Hegel and Comte. But, unfortunately, Kant's emphasis on the autonomy of human reason was totally ignored by the two and this partly accounts for their authoritarian political views. However, when the 'ideal' is allowed to set limit to 'reals', whatever of the latter fails to conform to the schematic requirement of the former is declared 'unreal' or 'irrational', or denied 'existence' altogether. And that is why it is no wonder to hear of Hegel's belief that Reason will find its highest expression in the Prussian State or of the Comtean's grave pronouncement that primitive tribes are irrational. Contrary to their professions of universalism, at least some followers of Hegel and Comte were definitely parochial and discouraged, may be unintentionally, all intercultural understanding and amity. And they developed what Marx calls an 'inhuman humanism'. Hegel sacrificed man at the altar of God and Comte at that of Humanity. Thus both Hegelianism and Positivism, viewed objectively, supported human alienation.

Apart from recent Positivism and Idealism, another trend of thought, Existentialism, which until recently did not prove very influential and respectable in academic circles, owes its origin to the Copernican Revolution. Kant's criticism of the ontological proof of God's existence broke new ground and helped man to be assured of his own dignity and pride of place in the world. If God were nothing more than an Idea of Reason, man felt himself rationally free not to believe in His existence. But this also proved to be the beginning of the rise of irrationalism. Since God was 'dead', man felt himself completely free to make the world for himself. And this attitude, unless tempered by a critical and responsible *concern* for what the world in itself is, easily leads to the worst form of subjectivism. The delight that had followed the announcement, 'God is dead', encouraged an irresponsible view of freedom-in (in the world). To this point I shall return in section IV of this chapter.

IV

The absence of Man's *concern* for what the world *is* encourages more than ethical irresponsibility. If some of the existentialists may be held guilty of ethical irresponsibility on the alleged ground that they harp too much on decisional autonomy, some of the constructionists may likewise be accused of ontological irresponsibility. By "ontological responsibility" I mean recognition of other(s) by the self, of the world by man. One may construct a theoretical system under the assumptions that others do not exist in the world and, what sounds more radical, there is no world at all wherein others could possibly exist. But one's *practice* is sure to betray one's inability to act according to one's theoretical professions alone. As we cannot *consistently* deny the relevance of the world to our *action*, we cannot deny the same to our *thought* or *belief* either. We are not free to do and think or believe whatever we like. Our autonomy is never absolute; for, what-we-are-not always impinges on the boundary of what-we-are. The world always preserves the right to return a NO to our (proposed) action or (supposed) idea. The relation-and-solitude dialectic is intrinsic to man in the world. The attempts to deny it in epistemology results in different forms of constructionism, embodying different (supposed) solitary persons' attempts to construct the world(s) all on their own. The epistemologist's task is neither to over-populate the world nor to under-populate it but to *describe it as truly as possible for him*, given, of course, his *worldly* limitations.

The expression *to describe the world as truly as possible* is open to several and incompatible interpretations. The terms *true* and *description* are notoriously ambiguous. There is a strong prevalent tendency to equate *true* with, or at any rate to bring it close to, *what pays*. There is another equally strong tendency to prove that the object of description does not exist. And in most cases these two tendencies are being championed by the same people. Neither of these views is very recent in origin, but it has to be admitted that their recent formulations in thoroughness and sophistication surpass the older ones. Broadly speaking, these views are historically associated with the school of experience. I say 'broadly speaking' because there are systems of philosophy, the *Nyāya-Vaiśeṣika* for example, where the standard European distinction between Rationalism/Empiricism, Realism/Phenomenalism, etc. does not hold good, and realistic ontology and the 'pragmatic' theory of truth go together. I must straightaway say that I am against 'de-ontologizing' the ontological entities, big and small, and 'pragmatizing' truth, both of fact and value. And then I shall submit in a rather outdated fashion that every attempt to do away with *things* or even to thin down things with *words* is logically bound to end either in failure or in replacing ordinary things by extraordinary ones.

It is ordinarily believed that Brentano overpopulated the ontological realm by characterizing every psychological phenomenon by 'intentional

inexistence of an object', the *reference* (*Beziehung*) to a content', *directedness* (*Richtung*) towards an object or the *immanent-object-quality* (*immanente Gegenstandlichkeit*). The directedness to a real object did not create any problem. But the problem was felt in explaining the directedness to an object which is not real. Physical phenomena were distinguished from psychological ones on the ground of their *lack* of directedness and reference. Brentano's phenomenological (act) analysis of psychological phenomena is alleged to have unnecessarily multiplied ontological entities. The allegation was raised, among others, by James and, later on, by Russell and his followers. The allegations and counter-allegations centred on the question: *How to decide rationally the necessity or otherwise of ontological entities?*

It is true that in the simple systems of science most of the ontological entities of the metaphysical systems are unnecessary and that 'scientific objects' may be 'described' in terms of certain functions. But several points are to be remembered in this connection: (i) simplicity of a system and its contentual richness are not inversely related; (ii) 'scientific objects' are abridged or censored experience—censored by stipulative definitions; and (iii) the role of *description* in science may be relegated to a minor and abstract position but not denied altogether. Whether certain ontological entities are necessary or not cannot be decided *a priori*. For deciding the rationality or otherwise of some ontological entities one has to look into the system wherein they occur or are used paradigmatically. I do not know as yet how one could rationally decide in favour of using the concept of absolute or system-invariant necessity. Those who believe in the fundamental or absolute 'laws of thought' fail or refuse, in most cases, to disclose their ontological commitment to an Absolute System with reference to which these 'laws' are implicitly defined. And that is why it is no surprise that they 'hold good' in all possible sub-systems of that unique system. The necessity that *obliges* us to believe or regulate our belief in a system does not *constitute* the system and is not cognitively informative *in details*. Even the absolute regulative ideals may be 'infringed' at least in details.

Russell's famous theory of description is perhaps the single most important attempt to expose the *logical* impropriety of such descriptive phrases as 'the present Queen of India', 'the author of *Waverley*', which purport to name (at least or at most) one object. Russell advises us to give up the assumption that the definite descriptions are proper names; i.e. we must not think that 'the present Queen of India' is a proper name of the person also called Indira Gandhi. While a 'logically proper name' is believed to have a (sentential) context-invariant meaning, a definite description has no context-invariant meaning but only in relation to varying sentential contexts. The proposition expressed by the sentence 'Scott is the author of *Waverley*' has for its meaning the three different propositions expressed by these three sentences:

- (a) At least one person wrote *Waverley*.
- (b) At most one person wrote *Waverley*.
- (c) There is nobody who both wrote *Waverley* and is not identical with Scott.

This analysis shows, among other things, that 'the author of *Waverley*' is not a name and that 'Scott is the author of *Waverley*' is not an elementary proposition, although its verbal expressions might persuade one to believe that it is. It was this view of Russell that made Wittgenstein remark, 'Language disguises thought', and 'the apparent logical form of a proposition need not be its real one'. On this analysis, propositions containing definite descriptions which describe no object, for example, 'The present Queen of India is married', are meaningful but false. Russell is aware that merely from the form of a descriptive phrase it cannot be definitely gathered whether a description is definite or indefinite. What is ordinarily contained in the form of 'the so-and-so' (definite description) may be found at times in the form of 'a so-and-so' (indefinite description). It is clear that a descriptive symbol is destined to miss its target (i.e. reference), for an object can never be *directly presented as the one and only object* of a certain form. At the receiving (i.e. descriptive) end, it seems, we have something other than what we are given (through acquaintance). Unlike demonstrative symbols, descriptive ones are doomed to remain *incomplete*. The search for simplicity and completeness (and clarity) betrays unmistakably the scientific and mathematical inspiration of philosophy. From the decline of logical atomism and the rise of language-games one should have thought that the search has proved abortive. We will see later on that it has a very important lesson to offer us. While Russell himself brings to focus the distinction between proper names and incomplete symbols, Moore thinks that Russell needs incomplete symbols primarily to define 'logical construction'. Since objects could not be clearly and completely expressed (or symbolized), logical constructions were required to be their substitutes. But the substitutes proved poor indeed. However, it should not be thought, although Russell himself gave occasion to think, that constructions are fictitious. Tables and chairs (logical constructions) are not to be confused with centaurs and mermaids (fictions).

Russell's theory of logical construction was first clarified by Wittgenstein and then developed elaborately by Carnap. Under the influence of Frege, Carnap realized 'the fundamental importance of mathematics for the formation of a system of knowledge and its purely logical, formal character to which it owes its independence from the contingencies of the real world'. And he tried painstakingly to establish the thesis that 'it is in principle possible to reduce all concepts to the immediately given'. Later on, this approach appeared to him 'too artificial'. For, he came to realize that the reduction of higher-level concepts to lower-level ones cannot necessarily

take the form of explicit definitions and that a more liberal method must be devised to introduce dispositional and theoretical concepts through postulates and correspondence rules. But it was again noticed that the correspondence thus established between theoretical terms and observational terms remains always *incomplete*.

The Russell-Carnap tradition of constructionism was considerably advanced by Quine. He tries to show that neither singular terms purport to name ontological entities nor do general terms commit us to theoretical entities. He does not believe at all in a realm of entities called meanings. Names appear to him altogether immaterial to the ontological issue. Russell has shown that descriptions can be eliminated; and Quine shows how names can be first converted into descriptions and then eliminated *a la* Russell. Quine shifts the ontological burden of description and names to bound variables—‘something’, ‘nothing’, ‘everything’. But he is careful enough to disown the conclusion that ‘what there is depends on words’, and admits that ‘truth in general depends on both language and extra-linguistic fact’. This admission is of little or no comfort for us when we are told by him that physical objects and forces, for example, are ‘irreducible posits’ and in a theory of knowledge their difference from fictitious Homeric gods, for example, is only one of degree and not of kind. For the pragmatist, both gods and physical objects are fictitious constructions, but Russell is obliged to draw a significant line of demarcation between logical construction and logical fiction. When the correspondence theory of truth is usurped by the pragmatic one, it augurs bad days not only for mythology and metaphysics but also for science. An adequate theory of knowledge is required to indicate the principle or principles of demarcation between mythology and metaphysics, on the one hand, and metaphysics and science, on the other. And what seems to me very important in this connection is this: the distinction has to be drawn in terms of truth-content. Otherwise, we will fail to explain even the patent distinction between computation rules and theories, and feel justified in using decisively refuted theories simply because they ‘pay’ in a few cases. A statement is not about reality if it can always be regarded as true merely by making adjustments in the system (or form of life) to which it belongs. To say, as Duhem and Quine do, that there is no experiment or decisive refutation only betrays an uncritical spirit of refusal to learn from mistakes.

Consistent with their moderate forms of pragmatism, Carnap and Lewis hold that what sort of ontological status will be accorded to such entities as ‘objects’, ‘things’, ‘numbers’, etc. depends upon our choice of language forms and not reality, and they are not prepared to deny, on pragmatic grounds, the distinction between the analytic and the synthetic. Quine’s pragmatism is radical and knows no definite boundary between analysis and synthesis. If the ontological status of objects (in the wider sense including the physical, the mental etc.) upon our choice of language,

then what prevents us from reducing (or translating) one category of objects (e.g. the mental) into another (e.g. the physical)? The relation not only between description and the described but also between name and nominatum cannot be satisfactorily interpreted purely in causal physical terms. Words and things are not *naturally* related. Their relations are fixed by human beings. But human intentions do not *constitute* things. They only *regulate* our actions and attitudes, sometimes successfully. If man could constitute the objective world either by intentions or by understanding, he would not have failed in his life either in knowing or doing. That man does fail is a common experience, but that this failure is due to *the persistence of the objectively structured world* (or *the existence of the different types of entities*) is not accepted by constructionists and pragmatists and ordinary language philosophers.

In the recent past we have been told of two different *techniques* of converting every failure into a success (or of proving every failure to be harmless)—one is formal-logical (associated particularly with the names of Russell and Quine), and the other informal-logical (associated with those of the later Wittgenstein and Ryle). In terms of his theory of quantification, Quine says that to be (mental or material) is to be in the range of reference of a variable. Ryle says that the ontological distinction between the mental and the material is due to mistaking one category of words for another (within one natural language). Ryle and Quine have at least one common anti-ontological axe to grind: they are determined to settle every word-thing dispute within a language (natural or artificial) which contains both 'thing'-words and 'word'-words, leaving the world of things in peace. Quine thinks that the disputes may be settled merely by *re-distribution* of the truth-values of the system of statements wherein these arise, and Ryle favours the idea of settlement by (categorical) *re-allocation* of the words. The methods of solving the ontological problems by *re-distribution of truth-values* and *re-allocation of words (or concepts)* are, no doubt, very ingenious and peaceful, but leave one very important question unanswered: (i) What is it that makes this re-distribution or re-allocation necessary? To say that it is a purely external question or that it is simply a matter of choice of language-form is not sufficiently convincing. For that raises further questions: (ii) Why could not all 'external' questions be internalized? (iii) Why had so many language forms chosen by so many judicious thinkers to be abandoned? (iv) Why had the programme of demonstrating *complete uniformity* of all language forms to be abandoned?

These are large questions and, I am aware, any attempt on my part to answer them adequately will require me to go beyond the scope of this chapter. But let me indicate briefly the lines along which answers to those questions are to be sought. (ia) Re-distribution or re-allocation is necessitated by experience of reality. (iia) Some ontological constraints can never be 'overcome' or 'internalized'. There is no such mind or language wherein

the whole of reality can be brought. (iiia) The inexhaustible or endless structural diversity of reality has not been clearly realized. The cognitive gap between hoping and hoped-for has not been properly realized, despite Kant. (iva) The unprovability of the complete uniformity of all language forms is not entirely due to Gödel and Tarski but also to the endless diversity of the world—endless to men who are essentially fallible.

V

Whether we characterize the object (with constructionists) as a 'bundle of sensations', 'family of sense-data', 'coagulation of sense-qualities', or (with absolutists) as 'constitution of transcendental subjectivity', 'intentional act of consciousness', the authority of Kant may plausibly be cited in either case. 'Understanding makes nature (and natural objects) possible' was the green signal for the constructionist. The absolutist, in spite of Kant's forbidding, transformed the regulative Ideas of Reason into constitutive ones, giving supremacy to the Idea of God. The former did not share Kant's profound concern for human feelings, hopes and duties and ignored the role of Ideas in terms of which Kant philosophized the non-theoretical aspect of human life. The latter ignores the actual distinction between pure and practical reason and achieves an imaginary unity of the two through an apparently rigorous and neat, perhaps too neat, method of 'transcendental deduction' or 'eidetic reduction'. The world seems too complex to be neatly roped in by any simple method. Husserl's sympathy for Kant's project to avoid Humean scepticism is understandable, but not so his assertion that intention not only identifies, connects and objectifies but also constitutes objects. The theory of constitutive intentionality is one more example of the betrayal of Copernicus in the name of Copernicus.

Kant's architectonic of reason ('the colossus of steel and bronze', as Scheler puts it) has inspired or intrigued both the builders and destroyers of philosophical systems, the synthesists and analysts. He is the philosophers' philosopher. From incurable idealists like Fichte and Hegel to through-going sensationalists like Mach, all have drawn heavily upon Kant. From Kant's view that 'only those concepts had meaning and value which were applicable to a possible experience' to Mach's view that the thing is 'a presentational complex of...experience'⁸ is just a step forward.

It is by transforming Kantian categories into analogical fictions or 'simple representational constructions for the purpose of apperceiving what is given' that Vaihinger concludes that 'objective phenomena can be regarded as if they behaved in such and such a way, and [that] there is absolutely no justification for assuming any dogmatic attitude and changing the "as if" into a "that"'.⁹

I entirely share Peirce's view that 'it is not so much by his answer to this question (How synthetic judgments *a priori* are possible?) as by the

mere asking of it, that the current philosophy of that time was shattered and destroyed, and a new epoch in history was begun'. If the conditions under which synthetic judgments *a priori* are made possible are, as Kant holds, in all cases the same, it is no wonder that all objects so judged will necessarily exhibit the same characters. In Peirce's own words, '*experiences whose conditions are the same will have the same general characters*'.¹⁰ Peirce, a great admirer of Kant, did not endorse Kant's constitutivism and gave up his realistic ontology. This realism is evident in Lewis also. It is with the gradual watering down of this realism that Kant's constitutivism degenerates into an extreme sort of constructionism. It is true that some contemporary naturalists are seriously engaged in showing that to be a pragmatist, one need not give up realistic commitment and embrace a thorough-going constructionism of the Quine-Goodman variety. Peirce's basic realism enabled him to see that 'any scientific proposition...is always liable to be refuted and dropped at short notice'. And it is to this realistic and fallibilistic attitude that I attribute his justified reproach to Kantians: 'You take *a priori* judgments at their own valuation, without criticism or credentials.' Kant never saw clearly that a scientific theory is nothing more than a hypothesis and is 'capable of verification or refutation by comparison with facts', for 'facts' themselves, according to him, are constituted by the mind which is supposed to verify or refute. Peirce anticipates Popper, another great admirer of Kant, when he says: "The best hypothesis, in the sense of the most recommending itself to the inquirer, is the one which can be most readily refuted if it is false."¹¹

Peircean realism has been logically defended, among others, by Lewis. On Lewis' showing 'there is no contradiction between the relativity of knowledge and the independence of its object'.¹² 'On the contrary', he holds, 'true knowledge is absolute because it conveys an absolute truth, though it can convey such truth only in relative terms.' In support of his thesis, let me quote him again:

If relative to *R*, *A* is *X*, and relative to *S*, *A* is *Y*, neither *X* nor *Y* is an absolute predicate of *A*. But '*A* is *X* relative to *R*' and '*A* is *Y* relative to *S*', are absolute truths.

"Thing as known" is a function of two variables; it depends on the mind, but also it depends on the thing.

...Unless the content of knowledge is recognized to have a condition independent of the mind, the peculiar significance of knowledge is likely to be lost.

So far as I know, the last point has been argued most persuasively by Popper. His view is particularly noteworthy because he is a fallibilist and, at the same time, a believer in the correspondence theory of truth. He says, 'The very idea of error, or of doubt...implies the idea of an objective truth

which we may fail to reach.¹³ He feels there is something definitely wrong in the classical philosophers' (relationalists and empiricists alike) exclusive concern with the problem of the *origin of knowledge* and relative neglect of that of *error and ignorance*. Knowledge was presumed to be the natural state of human and ignorance a conspiracy of 'senses' or 'abstract ideas'. To restore the human mind to its natural state of purity, it has to be *freed* either *from* the influence of bodily senses or from idols. It was thought that error is due to some alien influence and that truth is manifest to the natural state of human mind. But that is wrong. Truth—an absolute regulative ideal—is never manifest to the human mind; only error may be detected. Truth may be manifest to the Divine Mind, if any, which, by definition or idealization, is its complete embodiment or realization, and is not subject to any alien influence as there is said to be nothing alien to it. Man, being what he is, is never blessed with the *experience* of the *totum simul*; to him it is only a dream and in God or Godhead alone is it believed to have been realized. Man is in a very important sense intrinsically irrational. If the simultaneous presence of the world, in its totality and complexity, to the omniscience of God, is *defined* as knowledge, then man is condemned for ever to remain more or less ignorant. Man's irrationality, rather his inability to be completely rational, keeps him always liable to error. It is of no use to blame the 'senses', or 'abstract ideas', or language, or an invisible demon for conspiring constantly against our 'natural knowledge'. Knowledge is not 'natural' to man; he has to acquire it by design and preserve it by constantly reviewing critically the conditions under which knowledge is acquired. So instead of asking the Kantian question, 'What is it that makes our factual knowledge necessarily true?', we should ask the question, 'What is it that makes our factual knowledge liable to error?' And it is along the lines of a satisfactory answer to the latter question that a constructive theory of knowledge, fair to both man and the world, may be developed.

Reflexive criticism is the basic necessity of any constructive theory of knowledge. It has two aspects, the self and the other. Reflexive criticism is self-criticism and something else. Had there been no *other* to constrain the self continuously, self-criticism could reach an end or finality, which, if realized, could spare the self from the 'trouble' of further self-criticism. The self does not encounter any self-evident structure of its own in terms of which all *possible experience* can be interpreted. By mere inwardization of consciousness or phenomenological reflection, we cannot reach infallible or uncriticizable self-knowledge. Scheler seems to be justified in rejecting Husserl's view that the transcendental ego, once it had performed the phenomenological reduction, was infallible and in holding that self-knowledge is more liable to error than is external knowledge. To minimize this liability to error the self must try to follow critically the implication of the resistance it encounters within—resistance due to the independent reality and 'idols'.

VI

Man is a curious mixture of what he is and what he is not. The ideals which he hopes to realize, but has not yet realized, influence him from ahead, and the 'idols' which he has theoretically disowned continue to influence him practically from behind. Man is influenced not only by what he knows but also by what he does. His society embodies in it not only his heritage but also his aspirations. Society does so not independently of his *being* in it, and his being is to be understood in terms of his thought and action.

Man's being in the world is the key to his understanding of the world. It is an irremovable condition of his understanding the world. It is true that there are some naturalistic modes of understanding of the world, which almost entirely ignore this key condition. I say 'almost' because this condition cannot be ignored entirely *in practice*. What is due to practice cannot be isolated from, and has to be recognized along with the conditions of theorizing. Our encounter with the world is never direct, but is influenced by theories, myths, and even fables. The 'unconditional' human encounter with the world is an imaginary abstraction from the actual conditional encounter—conditioned by body, language, intention and history. And it has to be remembered that body 'misbehaves', i.e. is not entirely under our control, that language is misused, that intention is not always fulfilled, and that history is not free from accidents. To us truth can manifest itself only through these conditions. Man cannot completely disembody and dehistoricize his personality, withdraw his experience from language, and realize all that he intends.

Our sensations are not 'neat' or atomic. In this sense, they may be said to have self-transcending or other-intending capacity. The 'given' is never pure and its impurity may be said to be due to its 'immanent intentionality' and directedness. The 'intentionality' of all types of experience is not equally fulfilled; and the 'direction' of all types of experience is not equally reliable. There is no type of experience of which it can be truly asserted that its 'intention' is completely fulfilled and its 'direction' reliable or infallible. The ideal of phenomenological reduction is only an inspiring ideal. It can be completely achieved only through a lavish use of *epoche* and premeditated *upeksa* (indifference to or neglect) of the scientific details of the world. Looking at such experience as 'knowledge *of*', 'belief *in*', 'delight *at*', 'hope *for*', one must not think that each *of* or *in* is ontologically committed or leads us to 'something' undeniable. If I deny the atomicity of experience it is not imperative upon me to admit that in every 'bit' of experience the rest of the world is either present or somehow re-presented.

After Kant it is no 'wonder' to us to be told that the passage to objectivity lies through subjectivity. Husserl is perhaps within his rights in treating them as 'philosophical children' who fear that this view of arriving

at objectivity through the primordial fact (*Urtatsache*), 'I am', is threatened by 'solipsism or even psychologism and relativism'. But I think that the dream of infallible objectivity cannot be realized unless somehow the primordial presence (*Urprasenz*) of the world in the *Urtatsache* is presumed. This presumption further entails either (i) 'I am' constitutes the World, or (ii) The World constitutes 'I am'. I reject (i) and (ii) and also the *a priori* presumption which entails them. We have to go back to Kant and start afresh from a deeper (the 'deepest' is ever elusive) analysis of 'I am'. Objectivity is inter-subjectivity. Like 'absolute objectivity', 'infallible inter-subjectivity' is a dream concept, i.e. a regulative ideal. Unless I am the sole law-giver to all other subjects or objects or both, this ideal cannot be fully realized. The sole law-giver 'I' is God and not I who am temporal, finite, conditioned and fallible. It is true that I partly constitute the world, but I do so only by being myself constituted, at least partly, by the world. There is a circle in this inter-constitution, it is dialectic, and not vicious. I cannot *honestly* persuade myself to believe that I constitute the world, for the world often constrains myself to believe what I could not foresee and even hate to believe. The world has a constitution of its own and it does not always oblige me by adapting itself to my thought about it and honour my feelings for it. From my *actual* experience of the world, I can only *imagine* what *possibly* might be its constitution. My imagination may be *productive* in the sense that it has no point-to-point correspondence to my *identifiable* moments and contents of experience, but it is not *constitutive*. The correspondence between my *actual* experience and *possible* experience remains always *incomplete*, unless, of course, I set a limit to the latter by the former or by convention. Since 'the reason' which *influences* my decision to set such limits or introduce such conventions can be identified, although incompletely, it would not be entirely correct to say that the decision concerned is wholly arbitrary. Perhaps, the 'given' influences even our decision, but the changing and numerous layers (i.e. conditions) of our life through which it trickles into the core of decision prevent us from tracing its exact track. The complete autonomy of decision is only an ideal.

I cannot finally delimit (i.e. 'suspend') the boundary of any of my experience. There are experiences in me which are in spite of myself. But for man to live such a life of 'continuous' reluctance (or of discrete moments) is impossible. This is not only a subjective impossibility, it has its insistent objective or inter-subjective correlate. Our experience is being *actively* oriented by our customs, modes of expectation, hypotheses. Our *active involvement* in so orienting and organizing our experience in all its aspects is not to be taken as a mere instrument of avoiding the ignominy of the life of momentary experience. It is 'natural' for man to *discover* consciously the truths of the world by which he is being almost unconsciously influenced. Man is not a creator of truth; he is a seeker and discoverer of it. Truth is

objective. The world has its categorical constitution and this explains, at least in part, its ability to reject my hypotheses about it.

The cases of total rejection of our hypotheses or ideas about the world are extremely rare. The reason is not far to seek. Our ways of understanding the world in terms of some criticizable hypotheses are themselves *influenced* (but *not completely determined*) by the world. If this formulation sounds too metaphysical, it may be re-phrased in ordinary terms: Our personality is so influenced by our society and history that our ways of understanding the world are suggested by them. Here lies the significance of tradition in our attempts to explain the world. The significance of man lies still deeper. Man is free not to accept the suggestion of, and be influenced by, his society and history. This freedom, as I have said earlier, is not absolute,—but relative to the world or, to be more specific, its socio-historical modes. Man is free *only in* the world. This freedom explains the incomplete correspondence (or translation) between what is 'given' to man by the world and what he finds or does in it. *This* overplus of creativity must not be divinited, and man must not be transformed into the God who does not fail. Man does not create all that he discovers in the world. He finds much which he could not think or hope. This insistently suggests to man that the world has a structured constitution of its own. From this a constitutive metaphysician might rush to conclude that the *implication* of the suggestion can be *wholly* explored. This conclusion presupposes, as I have tried to show, a divinized concept of man; and the identity of the world is defined in terms of the mental structure or constitution of that divine or Rational Man or, what is its theoretical counterpart in other systems, God. My view is this. Man being what he is can explore only the *partial implication* of the suggestion that the world has its own structured constitution. Man is very unlike God, and has no privileged access to the minutest details of the world. Nor has he *sufficient reason* to believe that the macrostructures of the world are being steadily repeated in all its micro-levels. At least the history of science, unless it is conveniently interpreted, produces strong evidence against such a belief. The out-and-out intellectual strategy to interpret conveniently the scientific description of the world is one more evidence of denying man his central importance in the world. The strategy of converting every anti-evidence into a pro-evidence is a way of retreating from truth or of refusing to face the consequences of some views about the world and their authors. Man must be prepared to accept the anti-evidence of experience even if it entails partial rejection of his truth-claiming views. The experiential statements with due regard to which man is obliged to review his views and suitably modify them are not themselves immune from criticism for all time to come. At a different level of inquiry they may certainly be criticized. Like the man-world relation, the experience-theory relation is dialectical and growing, and not viciously circular.

Man can truly and differently identify the world but that does not deny the world its own identity. The primary identity of the world remains human and practical.

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Unity of the Physical World and Human Freedom

Is HUMAN freedom a part of the unity of the physical world? Or, does it stand apart as a phenomenon by itself? The questions are being debated in philosophy, science and religion down the centuries both in the east and the west, perhaps in all the cultures of the world. Affirmative answer to the first question implies some sort of monism, clear or anomalous. Affirmative answer to the second question leads to the denial of monism which may or may not be dualistic. For the limited purpose of this paper I shall confine my discussion only to pro-monistic and pro-dualistic types of world-views vis-a-vis their relation to the problem of human freedom. For the time being I propose to ignore the place of human freedom in the pluralistic world-views.

The first point to be noted is that our problem, the problem which the philosophers and philosophical-minded theorists encounter, is basically due to the *human* root of the concept of freedom we are talking about. It is easily conceivable that freedom is *not* human. It may be taken as an ontological concept or even a metaphysical category. In fact, some philosophers like Sankara, Kant and, more recently, K. C. Bhattacharya have thought of freedom without making any explicit reference to its human *root*. But no thinker, to the best of my knowledge, could ignore the importance of human freedom in the scheme of his thought. If one's *thought* cannot afford to ignore one's concern with freedom as a problematic phenomenon, it is due to one's own *active* character or *practical* nature. The *problematique* of freedom is essentially a practical issue, and not theoretical. A *critique* of freedom will show, among other things, (a) scepticism regarding freedom is an abstract theoretical conclusion which has little or nothing to do with our life and (b) it has no firm foundation or root to sustain its non-ambiguous or non-anomalous character. By critique I mean the principles of critical intelligibility and the term is not being used here in justificationist or Kantian sense.

The very concept of the physical world needs careful explication. The physical world, or what we call the physical world, has in it many "things" which none, neither the man in the street nor the scientist, would ordinarily agree to designate as physical. The examples which readily come to my

mind are such *mental* phenomena as memory, thought and imagination and such *vital* phenomena as growth, decay and death. If the said mental and vital phenomena are kept outside the purview of the physical world, the unity of the physical world is somehow compromised, if not abandoned altogether. If, on the contrary, the above mentioned types of phenomena are somehow accommodated within it, the resulting world-view is said to be vitiated by what is called *reductionist fallacy*. The reductionist position, though not very easy to spell out, is somewhat like this. The peculiar characteristics which are ordinarily ascribed to the vital phenomena like growth and decay or the mental ones like memory and thought are explicable in physical terms, e.g. states, powers, and motion. The antireductionist, whether he is a dualist or a pluralist, does not contest the possibility as such of constructing a coherent reductionist world-view. What is more, he may even be prepared to accept the former's basic methodological precept, viz. in scientific explanation the necessity of explaining *many* in terms of *few*, at times even *one*, is welcome, if not imperative. While this response seems sound in principle, one can hardly help the uneasy feeling in him regarding the advisability of constructing a theory of mind, including not only thought and imagination but also freedom, in terms of physical causal powers, their motion, complex transformation, etc. The uneasiness, rightly understood, is grounded in some persistent intuitions. One, who is not theoretically committed this way or that, may be ready, for example, to accept the physicalist explanation that human memories consist of complexly related traces, or joint effects, of the concerned person's previous sense-perceptions. But it is gravely doubtful whether one would be prepared to accept the physicalist account of human freedom as the concerned person's *reflective ability* to "see" the subjection of his initiative and enterprise as complexly determined by the laws of nature. Apart from the complexity of the said theory, it is difficult to resist the thought that a very heavy load, almost a "mysterious" one, is being put on the expression "reflective ability". Can a human body, construed exclusively in physical terms, be credited with the capacity to "see" itself clearly and "follow" its relation with the physical forces and laws of nature? Is not the said capacity or ability of body itself subject to those laws and forces? If so, how can the recognition of its law-governed connection be logically taken as stable and unerring? If it is so, to "whom" does it so reveal itself? Are we to postulate a *sākṣi puruṣa* (witnessing self) *a la* Śaṅkara or a transcendental self *a la* Kant which is claimed to be abiding and self-evident? If it is conceded that this reflective ability or capacity is as fallible as any other information that man is credited to have about himself and his relation with the rest of the world, does not *freedom* turn out to be illusory?

If the physicalist insists that the givenness of freedom in experience has nothing peculiar in it and that it is as questionable and corrigible as any other piece of empirical information, we are obliged, by implication, to accept freedom as an object, something negative in character. In that case,

freedom may not be known or experienced as an ordinary physical object. And, one might add, it is grasped either as an inevitable part of a natural process or as a temporary suspension of it, as an absence of a *law*-enjoined constraint. In either case one has to admit that freedom, born and grown in the womb of Nature and its laws, is an illusory empirical phenomenon, i.e., it does not and can not exist on its own right. Since in the physicalist scheme of thought there is no transcendental way-out or an escape route, the same empirical illusion has to be taken as real, despite its inescapable illusoriness as an independent phenomenon. Given his physical body and subjection of whatever he does and all that happens in him, mental as well as vital, human freedom can hardly be given an ontological status which is quite apart and above his psycho-somatic existence, quite unrelated to the space-time segment wherein his physical body is situated. In brief: human freedom is a complex physical phenomenon. But this conclusion seems to militate—persistently militate against our normal intuition of freedom.

Of freedom our intuitions are not identical. Different philosophers, primarily because of their human differences, have found that their intuition, if that is the word we are keen to use, differs rather widely. This is evident from the conceptualisation of their own intuition of freedom. Some of them “intuit” freedom as *absence of constraint* and some as *ability to initiate* some thought or action, behavioural or internal. Some philosophers “intuit” freedom in the form of an almost *inexplicable spontaneity* of body and mind. Another view of freedom is that it is the *recognition of an all-pervading nomic necessity*. The first view may be attributed to naturalists like Hume and Mill. The second one is associated with the names of Descartes and Kant. Leibniz seems to be a propounder of the third view. Spinoza, Marx and Einstein, to my mind, are the chief exponents of the fourth view.

The physical level and the human level of the world have some interesting parallels and analogies between them. Called upon to deal with these parallels and analogies across the *different* levels of world, one has to be very careful and critical. Let us first take up the pair of terms attraction/repulsion. In the world of physics, attractive and repulsive forces are common phenomena. The concepts of gravitation, inertia and space-time are central to the understanding of the behaviours of attracted and repelled physical bodies. But when the said pair of terms is used in the human context, the underlying connotations of the physical concepts of gravitation, inertia and space-time assume a different, perhaps somewhat metaphorical, character. The attraction that obtains, say, between the sun and the earth, is obviously different in nature from that which works between the mother and the child or between the lover and the beloved. In spite of the difference there is a clearly intelligible analogy between the former and the latter, the physical and the human, imports of the term “attraction”. At the human level, we will, perhaps, prefer the expressions “drawn *towards*”/“driven *away*”, or “repulsion”. The disanalogy between “repulsion” and “revulsion” is clear. The

repellant forces may not, necessarily, be, physical. The *feeling* of revulsion seems to have an element of value judgment in it. The “repulsed” may or may not be an object of revulsion. The limitations of the analogy are not so clear in the cases of “attraction”/“repulsion”, on the one hand, and those of being “drawn towards”/“driven away” on the other. Even in the latter case, the distinction between “repulsion” and “driving away” is not that unclear. The latter term presupposes, or at least suggests, a doer or an agent. No such presupposition or suggestion is attached to “repulsion”.

My examples may be more or less inaccurate and, to the proportionate extent, unsuccessful in making out the point I have in view. For, the efficacy of the expressions as examples are language-bound. The bodily expressions of man, especially those seen in *familiar* social contests, prove to be very efficacious, i.e. more specific in their meaningfulness. Though all types of expressions are context-bound and, therefore, more or less ambiguous, I think, the ways of minimising the ill-effects of ambiguity are less evident in the language of body, including speech acts, than in the written or printed language. It is interesting to study the reasons why even the language of science, ordinarily regarded as precise and well-defined, is found, on scrutiny, to be vulnerable to the ill-effects of meaning-shift and the resulting ambiguity. For example, the meanings of “gravitation”, “inertia” and “space-time” are not same in Newton’s absolutistic system and Einstein’s relativistic one. The non-availability of context- or system-invariant meanings raises many problems, some of which have bearing on the subject of this talk.

If ordinary language resembles a *family*, scientific language forms a *system*. The familial relations obtained between different parts of language, written or uttered, are flexible, somewhat indefinite in their reference, and rich in their connotation, whereas the expressions of system-bound language are relatively definite, often operationally defined, lend themselves to logico-mathematical formalisation, and rigid in their intra-structural or intra-systematic relation. The crucial two expressions of this discourse, namely, “unity” and “human freedom” are not of the same family. At least that is my linguistic perception. While “unity” has received systematic scientific attention and been given rigorous definitions, the same cannot be said about “human freedom”. The offered definition of “unity” in terms of consistency has not proved universally acceptable. Even then, one should note the point that in spite of Gödel’s disturbing finding regarding the theorem of incompleteness and the virtual abandonment of the programme of the Unity of Sciences launched in 1930’s by the leading lights of the Vienna Circle, “unity of science” as a research programme remains still alive at least in the weak Lakatosian sense. In marked contrast to “unity”, “human freedom” is a very nebulous and yet a very rich expression. I have already indicated some *different* and time-honoured meanings of “human freedom”. Given the difference of these meanings of the expression, it is not easy to assign a definite place to it in the *unity* of the physical world, unless, of course, one thinks

“unity” itself is subject to the law of semantic vagaries. Knowing well that every scientific world view is bound to be questionable and corrigible, its author tries his best to make it as true as his powers permit. Some aspect or the other of the great scientists—Kepler, Galileo, Descartes, and Hooke, from whom Newton learnt most, was partly refuted or corrected by him. For example, Kepler’s views on the laws of planetary motion, the “magnetic character” of the sun and the “natural inertia” of moving bodies leading them to rest in the absence of the motive force were not acceptable to him. Galileo’s assertions that the acceleration of falling bodies is constant at all distances and that the moon has no influence on the tides of the ocean proved also inconsistent with his findings. The Cartesian hypotheses that the planets are moved around by all-pervading ether in huge vortices and that atoms do not exist are rejected by Newton. Finally, Hooke’s view that the centripetal inverse square force acting on a body produces orbital motion with a speed inversely proportional to the distance from the centre of the force is rejected by Newton. Also he rejected the existence of “centrifugal” forces affirmed by Huygens. He introduced a concept of “centripetal” force.

Newton draws a clear distinction between mass and weight. Mass, being a measure of the body’s resistance to acceleration, undergoes a change in its state of motion or at rest. This is its inertia. Of bodies mass is also a measure of its response to a given gravitational field. Naturally, the question arises: What is the relation, if any, between a body’s (inertial) resistance and its (gravitational) response to a gravitational field? For the sake of its systematic unity, Newton’s inertial physics (*Principia*) was obliged to prove experimentally the constancy between inertia and gravitation.

Within the framework of Newton’s absolutistic mechanics, it was not easy to find a satisfactory answer to the above question. The scientist himself was evidently aware of it. He characterised his work as “the mathematical principles of philosophy”. According to him, “the whole burden of philosophy” was to reach the First Cause of the System of the World:

From the phenomena of motion to investigate the forces of nature...from these forces to demonstrate the other phenomena...expounded in...first and second books...In the third book I gave an example of this in the explication of the System of the World...by the propositions mathematically demonstrated in the former books...In the third I derived from the celestial phenomena the forces of gravitation with which bodies tend to the sun and the several planets...I wish we could derive the rest of the phenomena of Nature by the same kind of reasoning from mechanical principles, for I am induced by many reasons to suspect that they may all depend upon certain forces by which the particles of bodies, by some causes hitherto unknown, are either mutually impelled towards one another and cohere in regular figures or are repelled and recede from one another. These forces being unknown, the philosophers have hitherto

attempted the search of Nature in vain; but I hope the principles here laid down will afford some light either to this or some truer method of philosophy.¹

It is clear from the above quotation that, in spite of his consistent adherence to the mechanical world-view in the celebrated Cartesian-Galilean tradition, Newton is interested in explaining all "phenomena of Nature", including those of life and mind, in terms of matter and motion, space and time. Whatever happens in the external world or, speaking in more general terms, the structure of the physical world, is known to us as filtered through our sense-experience. However precisified it might be by experimental devices, both in view of the futility of the search for the First Cause of natural phenomena and the undeniable difference or gap between the world as it is and the same as available to our body-mind complex, one feels obliged to introduce an element of interpretation in one's theory of scientific knowledge. Following Galileo, Newton draws a distinction between the primary qualities, such as extension and inertia which lend themselves to mathematical measurement and formulations, and the secondary qualities, such as colour, taste, sound, which are sensations in the brain induced by the primary qualities. Man's mind is situated in the brain or sensations, to which (encoded) motions are transmitted from external objects by the nerves and from which (decoded) motions are re-transmitted to the muscles. This important distinction between the primary and the secondary qualities has been fully exploited, as we know, by Locke in his theory of knowledge.

Like Galileo, Newton was also a deeply religious man. But, given his basic concepts of mechanics, he did not know how to account for the causes of all motions, including those of (what we call) will. He was painfully aware of the limitations of "the power of the entire human intellect".²

Additionally, he was handicapped by his methodological decision not to use hypotheses which cannot be experimentally tested. By implication, this methodology led him to a sort of empiricism which was not to his scientific *realistic* taste. At the same time, his religious inclination and admitted limitation of all scientific findings were responsible for his frequent reference to God as the First Cause of the world of phenomena. This is bound to remind the discerning reader of Locke's dualism and, perhaps, more pronouncedly, of Kant's attempt to vindicate God of religion without giving up the basic framework of the Newtonian physics.

Newton's predicament on this basic issue is evident from Book III Part I of his *Principia*,

All these things being considered, it seems probable to me that God in the beginning formed matter in solid, massy, hard, impenetrable particles of such sizes and figures with such other properties, in such proportion to space as most conduced to the end for which he formed them; and that

these primitive particles being solids, are uncomparably harder than any porous bodies compounded of them; even so very hard as never to wear or break in pieces; no ordinary power being able to divide what God himself made on in the first creation.³

It is interesting to note that in terms of hard, unbreakable, and impenetrable particles and their motions, Newton originally proposed to explain everything not only physical but also chemical, vital and mental. His commitment to the law of parsimony prevents him from invoking different causes for different sets or levels of (natural) phenomena. Consequently, he speaks only of God as the First Cause. Even of God he speaks cautiously to the effect that His efficacy is known to us only through Nature. "For so far as we could know by natural philosophy what is the First Cause, what Power He is for us, and what benefit we receive from Him, so far our duty towards Him, as well as that towards one another, will appear to us by the light of Nature." Thus Newton draws a clear line of distinction between the natural and the super-natural. If his axioms or laws of motion, which are essentially natural and could explain to his own satisfaction all the natural phenomena, it is not clear why the notion of the supernatural (God) had to be invoked by him at all. So the task of secularisation of physics was left unfulfilled by him.

The unfulfilled task gave rise to two distinct trends of thought, viz., (a) that sought to show that the laws of Nature were supreme in every sphere,—material, vital and mental, and (b) that sought to show that the "seemingly supreme" laws of Nature all worked together for the realisation of a unified end under the guidance of a Supreme Intelligence. Newtonian revolution, especially its crux, universal gravitation, was received lustily and approvingly. Jean-Sylvain Bailly, the noted historian of science of the Eighteenth Century, observed, "Newton alone, with his mathematics [*Geometrie*], divined the secret of Nature. Like many other scientists of his time, he made a distinction between the Newtonian system as mathematical and as a true natural philosophy. Those who, like Maupertius, accepted it only as a mathematical system of calculable phenomena, were not willing at all to consider whether it is "in accordance with or contrary to sound Philosophy". Their interest was evidently to secularise Newton's physics and ignore altogether its tenuous thread of connection with the super-natural. Bailly himself maintained that it was more than a mere mathematical system, a system of natural philosophy or physics. To Laplace Newton's universal gravitation was a "great principle of Nature". In support of his pro-naturalistic view, Laplace expresses doubt about all those hypotheses which are not founded upon and testable by facts. According to many French materialists of the time, Newtonian gravitation is a single law which enables us to put together all natural phenomena in a most intelligible way and dispense with the notion of God.

The distinction between "natural system" and "philosophical system" became clear for the first time in the modern age in the system of Coper-

nicus. In the Foreword to Copernicus's *magnum opus*, Osiander states that an astronomer is called upon to perform two duties, viz., (1) to "compose the history of the celestial motions through careful and expert study" and (2) to "conceive and devise the causes of these motions or hypotheses about them". He is of the view that the scientist cannot, in any way, get to the "true causes" and that he will have to remain satisfied with "whatever suppositions enable the motions to be computed correctly from the principles of geometry". Copernicus' helio-centric hypothesis is merely a hypothetical device to connect, in the best possible coherent manner, the astronomical data available at the time. While, as an astronomer, Copernicus was required "merely to provide reliable basis for computation", the question of truth was left to the philosopher, who, too, could grasp it only through revelation, and not independently. Clearly, as Popper has rightly pointed out, Osiander was offering an instrumentalist interpretation of the Copernican revolution. Since it proved inconsistent with the received geo-centric hypotheses of Ptolemy, officially approved by the Papal authority, Osiander tries to interpret it as one more "probable" and "simple" hypothesis designed to bring together "a huge treasure of very skilfull observations."⁴

Copernicus' Preface and Introduction to his great work are also marked by an understandable ambivalence. At times he gives the impression that his view is merely hypothetical and not a revealed truth. But he also submits, though with a deep scholarly humility, that his hypothesis is in the best possible accordance with the available astronomical data. Copernicus uses the word "philosophy" as the pursuit of truth and refers to his acquaintance with the works of Pythagoras, Plato, Cicero and many other philosophers propounding different views regarding the motions of the earth. In the name of "freedom of imagination", he hoped that he too "would be readily permitted to ascertain whether explanations sounder than those of my predecessors could be found for the revolution of the celestial spheres on the assumption of some motion of the earth". He claims to have written his work on astronomy "for astronomers". He seems to suggest that the philosophers, not sufficiently familiar with astronomy, might consider his work as inconsistent with the authority of the Scriptures. Evidently, he was annoyed at least with some philosophical studies in the "movement of the world machine created for our sake by the best and most systematic Artisan of all"⁵. Copernicus took upon himself several difficult tasks simultaneously, namely, (a) to defend the Scriptures, (b) to reject the received astronomical theories of the time, and (c) to uphold "freedom of imagination".

Obviously, it was difficult to show the ways, within the limits of sense-bound reason, one could perform all the above tasks. Deeply influenced by the spirit of Copernican Revolution and Newtonian mechanics, Kant, as we all know, proposed to bring about a comparable revolution in the theory of scientific knowledge. To start with, he submits, *a la* Copernicus,

that his view is nothing more than a hypothesis. In this respect, he evidently departs from Newtonian methodology, hypothesis *non-fingo*. But, later on, he claims to have proved that his view is "proved, apodeictical and not hypothetical". Further, he acknowledges his debt to Copernicus in respect of not relying entirely on sense-representations. In support of his non-empirical (not anti-empirical but pro-transcendental) method he argues that "the invisible force (Newtonian attraction) which holds the universe together...would have remained for ever undiscovered if Copernicus had not dared, in a manner contradictory to the sense but yet true, to seek the observed movements not in the heavenly bodies, but in the spectator".⁶

Kant's true spectator is the transcendental self and not the empirical or embodied self. It is not available in and through sense-perception and as object. Its transcendental "subjectivity" has no objective co-relate which could be logically claimed to be its "expression" or "reflection" (*ibid.* B156, B430). Neither sense-representation nor thought of our body provides any clue to what the transcendental self, the freest self, is like. Neither the method of "observational astronomy", i.e. "sensibility", nor that of "theoretical astronomy", i.e., "intelligibility", attributed to Copernicus and Newton is of any help to know the self. "Twisting of words...merely sophistical subterfuge", Kant warns us, will not do here. Understanding and reason, including the use of the former "even in the Newtonian account of the structure of the universe", cannot take us beyond the realm of objects or phenomena to the self as it is, i.e., noumenal self. (Cr. P.R.A257/B313).

This formulation of the problem of knowing the Beyond is essentially Newtonian in its inspiration. That the genuine scientific inquirer encounters serious problems in getting to what lies beyond the reach of senses refuses to submit itself to their searching scrutiny, was clearly anticipated by Newton. But unwilling to cut off his world-views into two halves, phenomena and noumena, he stuck to his unitary world-view ascribing its origin and intelligibility to God, the First Cause. Kant, in contrast, committed to secularise his pro-Newtonian world-view, rejects the causal proof of God's existence and tries, almost desperately, to discover both the origin and the intelligibility of the world of science or, to use his own expression, the empirical world, in the structure of *human* understanding. But his studies convince him that understanding is affiliated to, and works under, the transcendental unity of apperception, essentially a function of the transcendental self, essentially a surrogate of a God-like Principle. The universal and necessary character of scientific understanding,—understanding of this or that individual, is basically grounded in the said unity. The relation between human understanding and the latter, notwithstanding Kant's all ingenuous arguments,⁷ remains unclear. The unity of the empirical world seems to be a gift of the transcendental unity of the self, i.e., "I think" principle. The lack of clarity in the relation between the said two unities, one might say, is a euphemism for the dualism between things-in-themselves

and things-as-they-appear, the dualism in which Kant lands us in his (unsuccessful?) bid to secularise the unity of the physical world and, simultaneously, to vindicate human freedom. It is difficult to see how Kant succeeds in carving out a place for freedom in the causally governed world of (A538-558/B566/586). We are, at the same time, citizens of two worlds. As embodied beings we are subject to the laws of Nature *but* the self in us transcends our bounds and frailties.

Apparently, Kant himself did not feel satisfied with his attempt to solve the problem of freedom-in-Nature and returns to it in *Critique of Judgment*. In our aesthetic judgments, especially in the purposiveness of Nature, he finds an *affinity* between the sensible and the supersensible, between the empirical and the transcendental. This affinity between the two realms is admittedly not to be taken as their *unity*. That is, without giving up altogether his dualism of *Critique of Pure Reason*, Kant in *Critique of Practical Reason* and *Critique of Judgment*, in moral and aesthetic forms of experience, seeks to grasp some *practical* principle of unity. Aesthetic experience is not basically cognitive in its orientation. "Judgment of taste is not a cognitive judgment and beauty is not a characteristic of the object, considered in itself."⁸

Its reference to object is oblique, metaphorical or "confused". Aesthetic experience is essentially "agreement of the representation of the object in the imagination with the essential principles of judgment in general in the subject." One feels deeply moved by the beauty of Nature and, initially, one might think that the basis of this aesthetic feeling is grounded in the "mechanical" forms of Nature itself. But, on scrutiny, Kant finds that the apparent purposiveness of Nature that enables us to form freely beautiful objects out of its otherwise mechanical structure is grounded *a priori* in ourselves. Kant highlights "the *ideality* of the purposiveness in the beauty of nature." Beautiful art wells up out of our "genius" and "must not be considered as a product of understanding and science", i.e., it is not cognitive. The fact that Nature lends itself to be freely formed, rather transformed, into art objects by human imagination is construed by Kant as an evidence of the work of the transcendental self (in us) which alone is free and capable of exercising that freedom for creative, is distinguished from cognitive, purposes.

Kant's effort to find a place for human freedom in what is called physical world seems to have clearly failed. Except in not-cognitive terms of *affinity*, he could not bridge the gap between the empirical and the transcendental realms. And there, too, the unity of the former was founded in the latter, in the apperception of the free self.

To break the deterministic spell of Newtonian mechanics, the physicist-philosopher who, to my mind, made very significant contribution is Mach. In his *Mechanics* (1882), he attacks both Newton's concepts of absolute space and time and Kant's concept of things-in-themselves. For, he points

out, these concepts are metaphysical in the bad sense and have nothing to do with *human* experience which is essentially "sensation". Newton's definitions of mass and force are circular. We know matter only through its effects on our senses and we define density only as mass per unit volume. To avoid the Newtonian circularity, he offers his own fundamental principle of dynamics. When two bodies act on each other, e.g., by their mutual gravitation, the ratio of the accelerations produced by them on each other is constant and depends only on something in the bodies which may be called mass.

Besides Mach the other scientists who contributed significantly in the Nineteenth Century towards the transformation of the Newtonian mechanics into new Einsteinian physics are Faraday, Maxwell, and Hertz. The phenomena of electricity received a new—field—interpretation. The lines of electrical force were depicted as a gravitational field. The concept of field proved very promising. One might say, as Einstein and Infeld did, "the first success of the field description suggests that it may be convenient to consider all actions of currents, magnets, and charges indirectly, i.e., with the help of the field as an interpreter".⁹

The new physics aimed at translating the language of classical mechanics into that of field. It was found that the changing magnetic field is accompanied by an electric field. Maxwell's equations may be said to be the laws representing the *structure* of the field. According to Einstein, Maxwell's findings are "the most important event in physics since Newton's time".¹⁰ The electro-magnetic field of Maxwell proved *really*, not merely theoretically, a picture of the physical world. Maxwell's equations truly *describe* the structure of the electro-magnetic field. Field represents energy. Changes in energy spread out in space with a definite velocity and produce wave. The velocity of an electro-magnetic wave was found to be equal to the velocity of light. According to the classical relativity principle of mechanics, if the laws of mechanics are valid in one coordinate system, then they are also valid in any other coordinate system moving uniformly relative to the first. But if two coordinate systems move non-uniformly, relative to each other, then the requirements of the classical laws of mechanics are not satisfied. In classical mechanics, coordinate systems were assumed as inertial systems. But in new physics, the classical concept of *inertia* itself comes under fire. The basic two assumptions of new physics are: (1) "the velocity of light in vacuo is the same in coordinate systems moving uniformly, relative to each other"; and (2) "all laws of nature are the same in all coordinate systems moving uniformly, relative to each other".¹¹ Given these assumptions, we are led by Einstein's theory of relativity to an "awkward" situation, namely, we are obliged to believe that two events which are simultaneous in one coordinate system may not be so in another. Given the relativity of the coordinate systems to space-time continuum, the concept of *simultaneity* itself undergoes a significant change. Even the "best clocks"

placed in different coordinate systems will not keep and show "the same time".

Relativity physics departs from classical physics in several other important respects. In classical physics, one finds two separate concepts of matter and energy, and two laws of conservation. In relativity, one encounters only one concept, that of mass-energy. Secondly, it dispenses with the classical concept of an absolute time. The old laws of mechanics turn out to be invalid if the velocity of moving bodies approach that of light. Besides, its validity is claimed to be universal, i.e. in all domains of physics, in all coordinate systems. But even the general theory of relativity, which gives a very deep and simple analysis of the space-time continuum and makes spectacular use of the concept of field, seems to be unsatisfactory in one important respect. It is yet to unify field *and* matter. A *pure* field physics is still a research programme and not an established theory.

Quantum physics poses a challenge to this proposed undertaking. Some physical quantities, of matter and electricity, for example, are found to be discontinuous and vary only by jumps. Thompson (1897) showed that electrons, like mass, vary discontinuously. Planck (1901) devised a Quantum Theory according to which radiation is not continuous and has to be dealt with individual units or atoms. Bohr was first (1913) to apply Planck's quantum theory to the problem of atomic structure, to the movement of planetary electrons. Bohr's atomic model aimed at explaining not only observed facts but also unobserved, i.e., observable, radiation or radioactive particles from outside. Heisenberg's quantum mechanics (1925) was based only on what could be observed, i.e., on the radiation observed and omitted by the atom. Schrodinger showed (1926) that material points consist of, or are nothing but, wave systems and that it was mathematically equivalent to Heisenberg's theory. Next year (1927), Heisenberg and Bohr found that, the more accurately they tried to determine the position of a particle, the less accurately could the velocity or momentum be specified, and vice versa. The resulting uncertainty in one's knowledge position multiplied by that in one's knowledge of momentum was, approximately speaking, found to be equal to the quantum constant h (unit of action). There is nothing in the physical world corresponding to the concept of simultaneous certainty of position *and* momentum. Eddington called this finding *the principle of indeterminacy*, usually known as *the principle of uncertainty*, and attaches to it an importance equal to that of *the principle of relativity*.¹²

In his characteristic manner, Einstein liberally praises quantum physics, towards the emergence of which his own contribution is rightly rated very high. He marvels at "the splendid agreement" between it and experimental findings. He notes its further removal from the old mechanical view and exclusive concern with probabilities governing "crowds and not individuals". Evidently he is not satisfied:

...quantum physics... [is] still.. based on ... two concepts: matter and field... [This] dualistic theory...does not bring our old problem of reducing everything to the field concept even one step nearer realisation.¹³

According to Einstein, the aim of all physical theories is the same, viz., to "try to find our way through the maze of observed facts, to order and understand the world of our sense-impressions". Although he claims that "our ways" are "freely invented", recorded history shows time and again that scientific inventions, including the *revolutionary* ones, are deeply influenced by the past findings in the field, both successes and failures. If we are to believe Einstein himself, all proclaimed revolutions are evolutionary.

To do away with the dualism of the quantum mechanics, Einstein's last "free invention", as we all know, was "Generalised Theory of Gravitation" wherein he claims "After long probing I believe that I have now found the most natural form for this generalisation, but I have not been able to find out whether this generalised law can stand up against the facts of experience."¹⁴

There is a wide-spread view that the classical mechanics, together with its attending determinism, is inconsistent with human freedom. This sort of determinism has been characterised by Popper as "*prima facie*".¹⁵

The expression, "*prima facie*" determinism, is likely to lead one to believe that there is a hierarchy of determinism. If Newtonian mechanics, as developed by Laplace, means one sort of determinism, it is difficult to avoid the conclusion that relativistic gravitational field theory also implies determinism, though of a different sort.

According to the Laplacean form of determinism, given complete and precise information of a particular state of the world and the laws of nature, it is possible to predict accurately its all future possible states. To quote him on the point:

We ought...to regard the present state of the universe as the effect of its anterior state as the cause of the one which is to follow. Assume...an intelligence which could know all the forces by which nature is animated, and the states at an instant of all the objects that compose it;...for [this intelligence] nothing could be uncertain; and the future, as the past, would be present to its eyes.¹⁶

The information required for the prediction pertains to the initial conditions of the concerned states, namely, their positions, masses, velocity and directions of the movement. It is difficult to imagine how a human being or, for that reason, even a Laplacean determinist-scientist, could possibly master all the information required for accurate prediction. Asked by Napoleon how his system of celestial mechanics could do without the notion of God, he is said to have affirmed that it was a *hypothesis*. Obviously, the

Laplacean demon was neither Godly nor human. This scientific world-view seems to have no place for human freedom in it. And this scientific view, though over-optimistic in its character, can hardly be regarded as truly human. The Darwinian theory of evolution strengthens this deterministic outlook. But some working scientists remain unconvinced of the correctness of this view which, according to them, could not give a satisfactory account of human freedom. For example, says Einstein: After long probing I believe that I have now found the most natural form for this generalisation, but I have not yet been able to find out whether this generalised law can stand up against the facts of experience.¹⁷

The case against determinism depends upon the nature of the formulation of what is meant by determinism. The determinism with which Kant and Laplace, for example, are concerned is primarily, not exclusively, scientific and physical. But we are familiar also with another sort of determinism which may be characterised as psychological. The names of Hobbes, Spinoza and Hume are closely associated, of course in different ways, with this view. The first two thinkers had developed their views before the Newtonian form of physical determinism was made available to the world of learning. Needless to add, Hume's version of psychological determinism is different from both Hobbes's and Spinoza's, and is, primarily, theoretical in character. It is interesting to note that each one of these thinkers, though *theoretically* committed to one or other form of determinism, is *practically* a strong defender of freedom. Hobbes is of the view that human will is "necessarily caused" by other things of which we, because of their complexity, are often unaware. He finds no fundamental difference between the process of causation in the natural world and that in the human world. Spinoza, on his part, recognises no fundamental distinction between passion, affection and will. The difference between them is basically a matter of clarity. If the causal vast and complex nexus in which the said phenomena figure is grasped clearly and distinctly, the phenomena would exhibit the same basic character. Since we are not able to trace the physiological and physical causes of our psychological phenomena, - passion, thought and will etc.-we are often inclined to believe that these are more or less autonomous. In other words, our lack of knowledge of the causes of the concerned psychological phenomena prompts us to conclude that these are more or less autonomous or free. Obviously, this conclusion is invalid. Our inability to follow cognitively the *continuous* causal nexus (of Nature) in which our psychological phenomena are phases does not logically entitle us to pronounce them as real, discontinuous and autonomous.

This argument against psychological determinism may be formulated even more strongly and positively. If this version of determinism is accepted, nothing psychological, not even our decision and choice, could be regarded as *of* this or that agent. This consequence of the doctrine of psychological determinism is bound to have grave repercussion on human responsibility,

accountability and theories of punishment. Obviously, none of the psychological determinists would be prepared to defend the view that since one's action is causally determined by one's will and one's will by some other things, therefore, one is not morally or legally responsible for what one does or abstains from doing. This makes two things clear: first, as mentioned earlier, psychological determinism is mainly a theoretical, not practical, doctrine, and secondly, freedom of will and action is not entirely unrelated to "other things". In order to vindicate the "autonomy of will", one is not logically obliged to construe that it is uncaused in every sense. The controversy often designated as "determinism *versus* freedom" may be advisably re-designated as "determinism *and* freedom". To answer the question whether physical determinism has nothing to do with human freedom or the former is antithetical to the latter, one is required, to start with, to spell out the senses or forms of "determinism" and "freedom" to which one stands committed. For example, the realm of determinism and that of freedom may be separated and then joined together either by a transcendental doctrine of pre-established harmony (of the Leibnizian form e.g.) or by an empirical doctrine of post-established harmony (of the Teilhard de Chardin form). Both these forms, it is to be noted, aim at reconciling the causal character of human decision with its claim of rationality, and of belonging to this or that human agent. It is also of interest to note that in the recent years writers like W.V.O. Quine, J. J. C. Smart and Donald Davidson are also engaged in reconciling the notions of causality and rationality without diluting the importance of human freedom and responsibility.

Popper's rejection of scientific determinism has two main components in it. First, he points out that the tenability of scientific determinism, even in its limited form, depends upon the presupposition that the system within which the proclaimed determinism works is *closed* i.e., insulated from, and impervious to, external—extra-systematic influences or forces. This presupposition, cosmologically speaking, is unsound. True, for heuristic purpose, *systems* are studied in isolation. But that does not mean the systems themselves, whether physical or social, are really isolated. With reference to human or social systems this point may be established more clearly and convincingly. Popper's second argument in favour of indeterminism is positive and strong. Here he highlights the significance of human *creativity*.¹⁸ What makes creativity possible, the factors underlying creativity, can hardly be characterised causal in the scientific sense. Though we, as embodied human beings, are placed in, and are subject to the laws of, the physical world, we are not deprived of our ability or freedom to choose, decide and act. The limits of this ability are not to be ascribed to physical determinism but to our relation with the worlds of physics, physiology and sociology.

Popper's theory of human and its relation to physical determinism have been spelt out both from the physical, the psychological and the "transcendental points of view".¹⁹

He speaks of "three Worlds". "World 1" stands for the World of physics: the World of land, ocean and physical fields of forces; "World 2", for the World of psychology, —of sensation, imagination, volition, thinking, etc., and the "World 3" is populated by the products of the human mind, theories, problems, books, journals and libraries, etc. It is to be noted that these worlds are ordered in the scale of abstractness/concreteness. "World 1" is most concrete and "World 3" least concrete. Speaking from the other end, one might say, "World 1" is most abstract and "World 3" least abstract. In between the extremes stands "World 2". Physicists like Alfred Lande and philosophers like Quine and Smart maintain that only "World 1" exists. The co-lateral psychological theory is behaviourism or the "identity theory" which tries to show the identity of the mental experiences with brain processes. According to Popper, each one of these worlds is *causally open* to the rest. It means that the physical world is *interacting* upon the mental world and also "World 3". This can be said of each world. The process of interaction is multilateral, mutual and open-ended. But Popper takes pains to point out that in order to interact on the physical world, the mental world needs more abstract and durable resources of "World 3". "World 3", ordinarily but not necessarily, interacts with "World 1" via "World 2". Human freedom is primarily a phenomenon of "World 2", but the conditions of its preservation and enlargement,—language, social, political and legal institutions, e.g., are to be found in "World 2". At the same time, it is to be pointed out that "World 2" cannot survive without "World 1". For, its physical sustenance is derived from the latter. In a way, "World 2", sustained from below by "World 1", aims at its elevation to "World 3" and its preservation and enlargement there. Science and technology, ideas and opinions, etc. of "World 3" causally interact upon both "World 2" and "World 1".

The doctrine of causal openness of the said three worlds is an anti-thesis of Laplacean determinism. The latter reduces man to a complex machine, a reminder of the Cartesian notion of animal. Given the present position of quantum mechanics, one is obliged to reject the Laplacean determinism but rejection of determinism by itself is not enough to vindicate human freedom. Human freedom, unlike God's, is subject to the conditions and restrictions imposed, directly or indirectly, by the three worlds. Boundless freedom, freedom in *vacuo*, is not what is available for man. Being a part of the world(s) he cannot completely rise above the same. The most convincing proof of human freedom, for Popper, is the *creation* of the works of, e.g., art or music. Popper likes to introduce himself as a pluralist and not a monist. This is, perhaps, mainly prompted by his intention to dissociate himself from reductionism of different forms, physicalism and panpsychism. There is nothing wrong to speak of different worlds in more or less metaphorical sense in order to fend off reductionism. That spirit is welcome to me. But once it is insisted upon that these worlds are literally different, then one is called to explain

their interrelation in details. In that context, merely to resort to the notion of "causally open interaction", as advocated by Popper, is, perhaps, not enough. For, we have to explain not only the aspects of the different worlds brought under the forces of interaction but also to make our views clear as regards those aspects which, at a particular point of time, are not subject to the forces of interaction. In other words, we cannot give a *connected* and *unified* picture of the universe consisting of *different* worlds within it merely in terms of "causally open interactions". True, Popper reminds us of the essential *incompleteness* of the scientific picture of the universe. Even if we assume, as I do, the obligation to give a *connected*, though *incomplete*, picture of the world, the obligation remains undischarged. It is a demand both of common sense and of that consciousness of ours which craves for a "meaningful world-view". Views on the worlds 1, 2 and 3, unless meaningfully connected, can hardly be regarded world-view.

It is not at all surprising that epoch-making scientific discoveries, whether they are called revolutionary or evolutionary, have their almost inevitable spill-over effects on other spheres of culture, e.g., morality and religion. On the contrary, it is instructive to recall that the scientific findings inconsistent with the received moral and religious views and practices, have almost always given rise to serious debates,—stimulating and acrimonious, and, at times, have even led to persecution and inquisition. The cultural impact of the theories of, for example, Copernicus, Galileo, Newton, Darwin, Einstein, Bohr and Heisenberg, exhibits at least three different trends. First, one group of interpreters defend the great scientific discoveries by trying to show their compatibility with the received religious and political views. Such interpreters are ordinarily known as "conservative". Secondly, another group of interpreters interpret the same in the best possible secular spirit, i.e., without being unduly influenced or intimidated by the contemporary religious and political cultures. Some members of this group prove "conservative" and some others "reformist." The third group consists of interpreters who highlight the incompatibilities between the findings of science and the accepted religious and cultural beliefs. Interpreters of this kind are called revolutionaries. That even the "revolutionary" scientific views are more or less culturally "neutral" and thus lend themselves to different interpretations may be illustrated from the story of science of the recent past. Besides Popper, two other distinguished scientists, Eddington and Fock, have offered strikingly different, if not opposite, interpretations of Einstein's relativistic physics. A.S. Eddington, it is well known, thought that the new physics paved the way to religious belief, philosophical idealism and freewill. He was clear-sighted enough to understand that Einstein's views have no *direct* bearing on the said three "values" to which he himself was deeply committed. His popular works²⁰ show that there was a systematic ambivalence in his attitude towards science and to his own value-commitment. As a Quaker, his commitment to "the world of the Spirit" is not populist or extravagant. At the same time, i.e.

often reminds us that there is another whole realm beyond that of science. In contrast to Eddington's pro-religious view, Vladimir Aleksandrovich Fock, a competent scientist and an official Marxist, gives a different interpretation of Einstein's physics. In the 30's when in the USSR the relativity theory and quantum mechanics were being criticised primarily for ideological reasons, Fock came out in strong defence of the new scientific views. His authentic and "internal" Marxist commitment did not stand in his way to recognise the merits of the new physics. But he wanted to purge it of its "idealistic" elements. He was convinced that, given time and further research, the new physics would be found to be consistent with the Marxist view of science, dialectical materialism. In some respects he wanted to modify the Einsteinian notion of the coordinate system. Infeld tells us that Fock's theory of harmonic coordinate systems was found unacceptable to the leading physicists of his time.²¹

One might say that it was perhaps a misfortune for Fock that while he was really an appreciative critic of Einstein, his Soviet colleagues criticised him for his appreciation of Einstein in spite of the "idealistic" aura of the latter's physics. The two different interpretations of the new physics given by Eddington and Fock illustrate, among other things, the point that at the level of *philosophical interpretation* the same scientific theory, however rigorously formulated it might be, could be presented in different, at times even contrary, ways.

Time and again, Einstein explained the relation of his scientific view to religion and other human values. His own view on the point appears to me very insightful and relevant. According to him, science as science, has not much to do with man's value-commitments such as freedom and religion. Of course, if truth is regarded as a value, the story turns out to be quite different. The scientist is firmly committed to it. However, it is to be remembered that the logical notion of truth-value (truth/falsity) is not axiological or value-loaded in any ordinary sense. One's commitment to relativity theory or quantum mechanics does not *ipso facto* entail acceptance or rejection of the commonsense view of freedom or that of God.

Einstein first refers to two views of God, —scriptural and moral. The God of the scriptures is often conceived as object of fear or source of favour, the giver of reward and punishment. This anthropomorphic view of God is not to his taste. He relatively prefers the moral or social view of God. This is the God who protects, loves and cherishes the life of man, individual as well as collective. He consoles man in his days of sorrow and suffering, sustains him amidst the ups and downs of life, and preserves the souls of the dead. This social or moral view of God, too, does not satisfy Einstein's deeper religious needs. He speaks of the "third stage of religious experience", the elements of which could be found in the traditional forms of religion, mentioned earlier. This form of religious experience is marked by what Einstein calls a "cosmic religious feelings". He finds its traces in the Psalms of David and the

teachings of Buddha; he finds, interestingly enough, this "highest kind of religious feeling" in men like Democritus, Francis of Assisi and Spinoza. In his view, "the most important function of art and science" is "to awaken this feeling and keep it alive in those who are receptive to it".

Einstein finds no antagonism between science and religion, provided, of course, one takes religion in the sense explicated above. Man's moral disposition and action should be based on sympathy, education, and social relations and needs. One's morality should not be based on fear of God's punishment or expectation of his favour. Religion, rightly understood, i.e. as a cosmic feeling, kindles and sustains the spirit of scientific research.

...I maintain that the cosmic religious feeling is the strongest and noblest motive for scientific research. ...Only those who realise the immense efforts and ...the devotion without which pioneer works in the theoretical research cannot be achieved are able to grasp the strength of the emotion out of which alone such works, remote as it is from the immediate realities of life [and practical results] can issue. ...Only one who has devoted his life to similar ends can have a vivid realisation of what has inspired these men and given them the strength to remain true to their purpose in spite of countless failures. It is the cosmic religious feeling that gives a man such strength. A contemporary has said...that in this materialistic age of ours the serious scientific workers are the only profoundly religious people.²²

The doctrine of a personal God interfering with the course of natural events, the operation of natural laws, is clearly unacceptable to Einstein. But, he is logical enough to realise that it cannot be *refuted*. What is not scientifically established cannot be dis-established by science. Science as such does not give or deny us freedom. Rightly administered, it does surely promote the spirit of freedom and enlarge the scope of freedom. Wrongly administered or applied, it dampens the spirit of freedom, and reduces the area of freedom. Promotion of science needs freedom of expression and unrestricted communication. Though it is psychologically acquired and secured in a sense, freedom cannot be preserved and promoted except through cultural and, particularly, political institutions. True, sympathy and scientific thought broaden and deepen our *inward* freedom, yet the latter's preservation demands some institutional support and guarantee.

The philosophical implications of quantum theory have been discussed both by scientists and philosophers for the last 60 years or so. Besides Einstein, Bohr, Heisenberg, Pauli and Dirac have also taken active part in this discussion. The discussion is marked by a number of confusions and exaggerations. Eddington, as I have pointed out, is strongly inclined to interpret the new physics, comprising the relativity theory and the quantum theory, as not only consistent with but also conducive to the growth of a religious view of life. Dirac, on the other hand, is strongly opposed to the religious interpreta-

tion of the new development in physics. It seems Bohr in some respects is inclined towards him. But, Heisenberg's position appears to be different both from Bohr's and Dirac's.²³

Dirac had little or no interest in the idea of God, and maintained that it was simply a "product of the human imagination." He echoed Marx when he observed, "Religion is a kind of opium that allows a nation to lull itself into wishful dreams and so forget the injustices that are being perpetrated against the people."²⁴

Pauli speaks of a "spiritual" framework based largely on religious values and ideas". These values and ideas are more or less shared by the members of a given society. Its substance is conveyed through parables and images, and are not, therefore, very clear and distinct in their meaning. Yet, one might say, as Pauli himself does, the spiritual framework is symbolic of "the entire wisdom" of the concerned society. The belief of the believer is not to be taken in any strict or rigorous sense. It is open to question and correction; and that explains why new scientific discoveries tend to affect the accepted religious beliefs and values, including human freedom. The separation between knowledge and faith that is brought about by the "new science" often proves temporary. The "emergency" that follows "scientific revolution" provides only a temporary relief to the "tough-minded" scientist. With the passage of time and the restoration of cultural normalcy, the sense of relief enjoyed by the scientist tends to disappear. New religious ideas and values reappear. A scientific culture devoid of any religious idea and value seems "horrible" to Pauli. It is almost inconceivable and rooted in a "vulgar" view of science.

Pauli is inclined to accept Einstein's notion of God as orderliness evident everywhere in Nature. It has nothing to do with the personal God of any religious tradition. One might say, at this stage, that this notion of religion is easily detachable from science and its relation with the latter is not clear at all. To say, as Einstein and Pauli do, that the *subjective* character of man's response to the *objective* orderliness of Nature, gives the impression that religious and moral values are merely a matter of *personal* taste and without any objective basis. In fact, this is Heisenberg's own question to Pauli. Pauli's answer sounds negative. That is, he is not prepared to accept the position that his or Einstein's views on religion and values are purely personal. He invokes Bohr's concept of *complementarity* to explain and defend his position. The scientist's image of Nature is not a faithful picture of it : it is "an abstract extrapolation...that has no counterpart in Nature". This is one side of the totality of Man-Nature relationship. Complementary to it is the idea of "a pure subject of knowledge ...that confronts no object". This idea of a witnessing self (*sākṣī puruṣa*) of (what he calls) Asiatic philosophy also appears to Pauli as "an abstract extrapolation, corresponding to no spiritual or mental reality". In between these two extrapolated extremes, the Natural and the Spiritual, Pauli, following Bohr's complementarity

concept, finds a "middle course". Simultaneously, conscious of the different forms of religion and remaining committed to his professional perception of truth, the scientist can, and in fact does, develop a wider world-view which is populated both by facts and values.²⁵

When Heisenberg communicated this discussion between him, Pauli and Dirac to Bohr in Copenhagen, Bohr "jumped to the defense" of Dirac. He commends Dirac's rejection of the idea of a personal God and love for clarity of logical language. Quoting Wittgenstein, "whereof one cannot speak thereof one must be silent", Bohr appreciates Dirac's impatience with the unclear language of religion. He also confesses that the idea of a personal God is "foreign" to him. But, then, he speaks something very interesting on the difference between the language of religion and that of science. The former is close to poetry and is therefore bound to have images, parables and even paradoxes within it. To think, as we are inclined to do, that science is concerned with objective facts, and poetry with subjective feelings is too simplistic and "too arbitrary". Simply, because religion and poetry are primarily concerned with subjective feelings, one must not think that the poetic and religious modes of experience are not expressive of "genuine reality". Bohr is clearly opposed to the idea of "splitting this reality into an objective and subjective side". This approach, according to him, is alien both to the spirit of relativity theory and the quantum theory. He points out that "simultaneity" contains a subjective element. The untenability of the objective/subjective distinction becomes even more clear in the quantum theory. One can still use the objectifying language of classical physics upto a point. But one has to recognise that to make predictions without reference to the observer or the means of observation, i.e. dispensing altogether with the "subjective" factor, is just not possible. Given this situation, Bohr feels justified to observe that, "every physical process may be said to have [both] objective and subjective features".

In response to Heisenberg's specific question whether modern physics provides a solution of the problem of the freedom of the will, Bohr's response is clear and negative. He argues to the effect that the quantum theory neither vindicates the freedom of the will nor proves divine intervention in the process of Nature. This whole attitude is based on misunderstanding and confusion. The psycho-somatic process leading to action from motivations is complementary to the process of Nature which the scientist describes in terms of statistical laws, i.e., in terms of groups or aggregates. The scientist's way of looking at natural events and the philosopher's way of looking at human actions are different but not contradictory. Bohr believes that "our different ways of looking at things must fit together in the long run, i.e., we must be able to recognise them as non-contradictory parts of same reality, though we cannot yet tell precisely how". In support of his view he refers also to the *complementary character of causal language and teleological language* in the field of life-sciences. The causal and the teleological

description of biological phenomena, though mutually exclusive, are "not necessarily contradictory". He maintains that "we have good reason to assume that quantum-mechanical laws can be proved valid in a living organism just as they can in dead matter".²⁶ Bohr's position shows that in fact he differs from Dirac's radical position, appreciates the meaningfulness of the language of religion and that of poetry, and yet, as a scientist, feels the necessity to be cautious against the possibility of slipping into the populist pro-religionist, almost divine-interventionist, interpretation of the new physics. Religionism is to be distinguished from religiosity. The basic problem which seems to disturb both the philosopher and the scientist is how to draw a coherent theoretical picture of the nature of reality as a whole with a place for human freedom and other values in it. The question may be reformulated in this way. How to *accommodate* freedom and other values in the scientific scheme of natural things. The rationale of this question owes its origin to the assumption that matter and motion, scientifically speaking, are of such a nature that its causal dynamics seems to negate human freedom and reduce consciousness to a mere epiphenomenon of the physiological system and the phrenological processes. Following Piaget, David Bohm reminds us that it is from the roots "mod", meaning "measure", and "com", meaning "together", that we have to understand the true significance of the term "accommodation" which is "establishment of a common measure".²⁷

Accommodation of freedom and other values in the scientific image of the physical world is supposed to entail "showing" how the referents of these terms could be *fit* together, cut to a *pattern* and conform to the same set of *rules*. The new physics, called upon to accommodate (to the extent it was possible) the findings of the classical physics in it, had to *adapt* itself to the latter. In the process many elements of the classical physics, as pointed out by Bohm and others, had to be either abandoned altogether or reformulated differently in the new scientific image of the world. This was an imperative for *assimilation* (literally meaning, *digestion*) or understanding of the new physics. The scientist's primary task is assimilation, and the secondary accommodation. When he lays bare the "way" in which he performs the said two tasks, the scientist helps us to understand the new science. It has been rightly pointed out that the scientist's understanding of the world, the totality of reality, is analogous to *artistic perception*. I would like to add that it has a striking similarity also to the *artistic mode of creation*. The artist, like the scientist, also fits different elements together in order to create a meaningful whole. Both of them follow certain rules, however simple or complex they might be. *Unruly* activity never produces either science or art.

Though reality as a whole, i.e., the totality of law-governed things of Nature, is not cognitively available to any human being, one has no good reason to believe that it is not *knowable*,—knowable in principle. Everything

we know, we know in relation to other things, and the degree of the former's relativity of existence to the rest is *measurable*,—measurable again in principle. In practice, everything known scientifically is more or less an abstraction. The complexity of relations and the flux character of reality in which a scientific object—be it an individual or a kind—is “found” make it impossible for us to grasp it in its concreteness. By implication, then, Bohm argues, one has to accept that one has to remain satisfied only with relative truth about every scientific assertion. The whole reality within which different cognitive domains and different abstractions and their *relative truth* are available is, in itself, absolute and concrete but not a possible object of knowledge. The basic reality, i.e., the totality of matter in the process of becoming, is gradually unfolded before, and presented to, us through an inexhaustible series of abstractions of “approximate validity, in limited contexts and conditions, and over periods of time that are neither too short nor too long”²⁸.

From what is being said one might think that there is no objective truth or validity of any scientific assertion and that it is due to the relativity not only of the object of scientific knowledge but also that of the scientist himself as knower. But Bohm rejects the pessimism underlying this view.

In our point of view, we admit that...all things do actually colour and influence our knowledge; but we admit also that nevertheless there still exists an absolute, unique and objective reality... [“relativity is absolute”]...The essential character of scientific research is...that it moves towards the absolute by studying the relative, in its inexhaustible multiplicity and diversity.²⁹

Bohm's theory of hidden variables aims at disproving the claim that the last word on the journey in search of a non-existent causal substratum of reality has been pronounced by the quantum theory. There is no last word in scientific research. The chance factor operative in objective reality does not rule out its basic lawfulness. No strong ground is provided by the quantum-mechanical co-relations for disbelieving that there is a sub-quantum level marked by orderliness. The dualistic ontology of the quantum mechanics need not be taken as a very definitive and conclusive position. Bohm claims to have found out a “deep” order in reality which is consistent with *causally* determinate and continuous movement of relativistic physics, on the one hand, and probabilistically predictable (but causally “indeterminable”) and continuous movement of quantum mechanics, on the other. His claim is tentative and qualified in very many ways. The sub-quantum order of Bohm is called “implicate” or “enfolded”. Space and time are not dominant factors in this deep implicate order. The relationships of the dependence and the independence of different elements in this order are not primarily intelligible in terms of spatio-temporality. In this order

or totality is rooted the explicate or unfolded mosaic of the physical, life and psychological spheres. When Bohm observes that matter, life and consciousness are all different *projections* of this implicate order, it is not clear, frankly speaking, what he really means. At least one thing seems clear, namely, the order he speaks of, is very much a part of scientific research programme—though it may lie beyond the reach of human experience at a particular point of time. This order is not metaphysical in the bad sense. When he observes, for example, that the totality of all that is, is a coherent whole and that matter, life and consciousness are all its mentally available abstractions, one gathers, may be wrongly, the impression that the implicate order as such is undefinable. The difficulty is that if this impression is correct, the implicate order ceases to have much of its scientific value. There is nothing wrong in affirming, *metaphysically*, that the deepest or the highest reality is undefinable or inexplicable. The problem arises in respect of determining the relation between the “implicate” order and its “explicate” or empirically displayed counterpart. For the scientist this question is very relevant and he is professionally obliged to offer a “proposal” which is, at least indirectly, testable. Instead of clarifying the issue, Bohm intrigues us by some of his “metaphysical” observations. Referring to the nature of the enfolded-unfolded universe as the ground of everything that is, he writes:

At any particular moment in [the] development [of such views as Bohm’s which] may arise will constitute at most a *proposal*. It is not to be taken as an *assumption* about what the final truth is supposed to be, and still less as a *conclusion* concerning the nature of such truth. Rather, this proposal becomes itself an *active factor* in the totality of existence which includes ourselves as well as the objects of our thoughts and experimental investigations. Any further proposals on this process will...have to be viable... [marked by] a general self-consistency as well as consistency in what flows from them in life as a whole.³⁰

The train of reasoning, following which Bohm comes to the conclusion “that the explicate and manifest order of consciousness is not ultimately distinct from that of matter in general”, is difficult to understand for a person like me, who has no professional familiarity with theoretical physics. But my task in the paper is very modest. That is to *conceptualise* the findings of scientists and, particularly, the presentations of the same by them. As a philosopher, I do not think myself competent to pass judgment on the scientific tenability or otherwise of their conclusions. But it seems to me that Bohm’s account of “the enfolding-unfolding universe and consciousness”, though very ingenuous, is not easy to follow. For example, it is not at all clear to me how from the “bottomlessness” of the explicate order one can positively affirm that it is grounded in, or, at any rate, has affinity

to, consciousness. From the other, i.e. matter-energy end one can, with equal plausibility, raise the question: how the material stuff of the universe "melts" into, or comes out of, consciousness. In the wake of the rise of Heisenberg's principle of indeterminacy, we heard of the exciting finding of "de-materialisation of matter". Some ardent believers also spoke of the hidden spiritual character of reality. Left to myself, I, as a gradualist, am inclined to believe that matter, life and consciousness are related to each other in terms of affinity, though one may not term them as exactly as integral, aspects of one and the same larger unity. It is one thing that for complex, almost inscrutable, cultural reasons one is inclined to *accept* a particular image of the reality as a whole, and it is quite a different thing to be rationally and critically persuaded of the *truth* or validity of the cherished image. I agree with Bohm that the scientist is always engaged in exploring the possibility of striking a deeper and simpler picture of reality than the one that is available at a particular point of time. In that sense, I entirely endorse the "proposal" or provisional character of his implicate order.

The graded and 'affine' (if one may be allowed to take liberties with grammar) properties of matter, life and consciousness have been emphasised by the evolutionist, both of the pro-naturalist and of the anti-naturalist persuasions. I have examined their views elsewhere.³¹

The evolutionist views may be studied under three heads: those advocated by naturalists like Darwin, those propounded by pro-naturalists like Teilhard de Chardin and those put forward by anti-naturalists like Sri Aurobindo. I am painfully aware that my proposed classification of evolutionary views is overlapping or fuzzy. Even naturalists like Darwin and Marx attach great importance to the concepts of creativity and consciousness. Secondly, Chardin starts as a pro-naturalist, but ends up with a sort of antinaturalism, highlighting the supremacy of consciousness. And he takes pains to point out that the seemingly anti-naturalist phase is marked by "compression" or encapsulation of consciousness and consciousness is "expression" or de-capsulation of natural forces.³²

I find strikingly similar sort of arguments running through Sri Aurobindo's *magnum opus*.³³

His view has been often characterised as divine materialism. The highest form of consciousness, the Divine, is said to be there in matter in an inconscient form. The materiality of matter is not to be taken in any absolute sense. He affirms that there is no antagonism, or even hiatus, between matter, life, mind and supermind. These are terms, "abstract" phases, of an unbroken continuum. When one studies Sri Aurobindo and Teilhard de Chardin, one feels one is being introduced to the conceptualisation of one's world of experience in general or philosophical terms. True, this conceptualisation should be answerable to scientific findings and subject to refinement in terms of the same. But these enquiries are primarily philosophical in the contemporary sense. For example, when Sri Aurobindo

says that matter is *involved consciousness* or that consciousness is *evolved matter*, he is not founding his views on experimental findings. In other words, philosophical conclusions are not surrogates of the scientific ones. But that does not mean that they are totally unrelated to them. The philosopher wants to present an *intelligible and coherent* world-view wherein the general views of such macro-phenomena as matter, life and mind occupy very important positions. From the other end, one might point out that he is not looking into the micro-level properties and relations of material, vital and mental phenomena. But he is logically called upon to show the consistency or, at any rate, lack of inconsistency, between different levels of the above mentioned phenomena. The philosopher gives us a *speculative map* or hypothesis trying to connect different kinds and levels of phenomena. May be his speculation is influenced by, or is partially based upon, culturally available learned views. But the value of philosopher's speculation mainly consists, for the interim period, in providing coherent theoretical frameworks to be taken up and tested by practices and scientific investigations. Some people, especially the religious and aesthetic-minded, seek and find in them "pure" intellectual and emotional satisfaction.

The work of the theoretical physicist or the cosmologist is strikingly similar to that of the philosopher. My reference to the works of the scientists like Einstein, Heisenberg and Bohm, on the one hand, and philosophers like Sri Aurobindo and Chardin, on the other, is intended to show, among other things, that both types of thinkers are equally *concerned* with the issues of securing place for human consciousness and freedom in the physical world. But they pursue their concern in different ways. Admittedly, these ways are complementary and not antagonistic. For, otherwise, their findings and arguments could not present a coherent and intelligible world-view.

Though the concern of the philosopher and the scientist is identical at the highest level, one's expectation from the latter is of a more rigorous and demanding sort. While Sri Aurobindo's evolutionary metaphysics may be accepted as a metaphysical hypothesis, *or* it may be rejected on the ground of non-availability or inadequate availability of scientifically tested evidences, one is not ordinarily prepared to accept this metaphysical sort of disjuncts, i.e., either/or (equivocal) formulation of a view. When Bohm, for example, tells us that different world-views, in spite of their difference, are "active factors" in the flux of reality shaping its course, I, for one, do not feel very enlightened. Intellectual tolerance and preparedness to consider different world-views is of course, welcome. But this does not mean that we can dispense with critical attitude, in philosophy and science. One has to draw a distinction between the more correct and the less correct views, between good, bad and bogus science and philosophy.³⁴

There is no denying the fact that, in the name of vindication of human consciousness and freedom, a good deal of cheap and intellectually pernicious

stuff is gaining currency. "Oriental wisdom" is often being invoked in this context and put to various sorts of use, good, bad and indifferent. Buddhism, Yoga, Taoism and Confucianism are being "freely" interpreted to suit the intellectual palate of the confused seeker. When I mention these abstractions of modern science and modern philosophy, I do not mean to pass stricture on the speculative adventure of the professionally responsible scientists and philosophers. Some adventures of consciousness are bound to be speculative to start with.

I hope it is clear by this time that the main aim of my argument is to vindicate (a particular notion of) freedom (not yet spelt out), which is not inconsistent with the findings of the modern physics. At this stage it must, however, be affirmed clearly that it is not the task, certainly not the primary task of the philosopher of religion and morality to define his position on freedom taking the cues from science. It is evident from history that scientists differ among themselves not only from epoch to epoch but also within every epoch. If the moral thinker is required to play second fiddle to the dominant scientific theories of different, at times even contradictory, sorts, his view will be suspect in the eyes of every critical thinker. What I am trying to understand and spell out is the relation between *freedom* (and not *theories* of freedom) and (the scientific images of) the physical world. To try to make our experience or intuition of freedom as adjunct to the changing scientific *authorities* is to go against the very *critical* spirit of science. The authority of science is certainly not expected to be like that of this or that theological order, i.e., dogmatic, spiritual and uncritical.

I may be told that what I term experience or intuition of freedom is itself theoretical and, further, that even experiences and intuitions differ from person to person. In a sense this contention is perhaps true. Without an element of theorisation, our intuitions and experiences are not communicable, comparable and criticisable. But this sense of our experience of freedom seems to me secondary. The primary sense of freedom is, perhaps, unquestionably primitive. In this sense, freedom is the basis of our communication, comparison, criticism and similar other characteristic human activities.

The influence of Nature on us, on our freedom, can hardly be denied. Not only the forces of Nature *determine* us *practically* but also the theories on those forces have their practical *influence* on us. In other words, the impact of theories of science on the human mind is both theoretical and practical. We are influenced by theories in different ways, directly, i.e., psycho-somatically, and indirectly, i.e. through technology and institutions resulting from theories. If we bear in mind the efficacy of the silent forces of *environmental instruction* on us, we would be able to realise that, in the long run, technological and other institutional influences, on the one hand, and theoretical ones, on the other, tend to *converge* on us—on our body-mind complex. The relation between the two sets of influences is essentially *dialectical*. And

as a result of that, their areas of convergence often turn out to be points of *divergence* and of a new departure at levels higher or lower—depending on various attending conditions.

The relation between man's freedom and his environment is not simply causal, i.e. one-to-one, type. It is complex, i.e., many-to-one *and* one-to-many, type. For example, I, as one, am free in civil society, i.e. among many. Metaphysically speaking, one's freedom is "grounded" in many enabling "conditions" spread over the world and, in turn, the "consequence" or "effect" of the former on the latter, though invisible, is undeniable. One-to-many and many-to-one characters of freedom are more "visible" in the social world. Metaphysical or cosmological elements of this view, many-in-one and one-in-many, may be found in the Upanisads and Leibniz's monadology. In a sense, freedom is indeed unitary and indivisible.

Freedom is both "compressed" in the human body and "expressed" by it. The body has its compressive-holding powers and expressive-articulative competences. For example, music, dance and use of language, properly analysed, show that these experienceable "performances" have their enabling "hinterlands" or competences *within* us and are enriched and strengthened by sense-experiences. These "hinterlands" are pointers to, and glimpses of freedom,—grounds of our psycho-somatically retainable and exercisable competences.

Negatively speaking, primitivity or unspeakability of freedom does not mean that it is transcendental or "beyond" and, therefore, has to be postulated in the Kantian fashion, or metaphysically posited in the Vedantic way. In a very important sense, it is *in* us, as human phenomena *in* the world, notwithstanding the subjection of the world to the laws of matter-energy. This *primarily* practical. No practical experience of freedom can exhaust sense is all its possibilities or explore all its horizons. So an element of transcendence, i.e., inexhaustibility or boundlessness, is there in every experience of freedom. But that does not mean that this experience is experience of "something" which is itself beyond the world, i.e. transcendental in the strong sense.

The last point which I like to mention but do not propose to elaborate here is this. The practical primacy of freedom,—experience of freedom, explains, to a great extent, why in our choice of contesting theories not only of science but also those of values, including freedom, we are influenced more by practical considerations than by anything else, theoretical reasoning or methodological criteria. For, neither the "unity of the physical world" nor "human freedom in it" is a once-for-all given, i.e., unhistorical, phenomenon. The world with man situated in it is not a *static totality*. Human personality is not an *inert unity*. Both are *dialectically* shot through and through by history, by change, i.e., the flux character of reality. My reference to one-to-many and many-to-one relations and the dialectical character of the same is intended to emphasise the dynamic unity of the world and human freedom as phenomena. These are really and literally *phenomena* in the sense that their "truth"

keep on appearing to us ceaselessly and without end. This open-endedness of the world and human freedom has to be seriously understood. The basic flaw of the mechanical world-view is that it is causally and historically closed and "open" only to an "external" and hypothetical God and His intervention. The same criticism, in a slightly different manner, may well be levelled against the absolutism of the pro-Hegelian variety. In the latter case, too, reality is construed as *absolute* and given once for all. Strictly speaking, Hegel's Absolute knows no history in it and even its transition from the stage of "abstract idea" to "concrete spirit" is only seemingly historical. History does not add to it anything new nor can impoverish it in any way. Its intelligibility is not historical. On the contrary, history is said to owe its intelligibility to the unity or totality of the Absolute. In this connection, Marxian dialectics and David Bohm's view of ever-unfolding universe appear to me very insightful.

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Action Reason and Cause

CALLED upon to contribute a paper on the subject indicated above, I had some initial hesitation in mind. The reason (or should I say *cause*?) is twofold. To my mind, the contemporary literature on the subject has been enriched, mostly by social scientists, especially economists, and not professional philosophers. And my familiarity with it is somewhat out-dated. Secondly, I am not sure whether I have anything and new to add to what I published on the subject in the past.

In 1961-62 when I was preparing a dissertation on the Structure of Explanation in Social Sciences, I expressed my view thus: "There is no incompatibility between the generality of causal laws and the uniqueness of historical events; rightly understood, they are complementary"¹. At that time my understanding of the issue was largely influenced, among others, by hypothetico-deductivists or methodological monists like Popper, Hempel and Oppenheim. Even at that time I took serious note of the opposite views propounded earlier by Croce, Collingwood and their followers like Oakshott, Walsh and Dray. By that time, the views of Wittgenstein, as interpreted by Ryle and Winch became quite influential. Taylor and Von Wright were yet to spell out their views on the subject.

In 1969 when I was trying to clarify to myself various concepts associated with the word *reason*², I felt somewhat bewildered. I find that bewilderment is shared even now by some philosophers like Putnam.³ I enumerated at that time several meanings of *reason*: (i) argument, (ii) motive or intention, (iii) cause, (iv) premise or justification, (v) an intellectual faculty and or function of mind, (vi) intellect or intelligence personified (God), (vii) sanity and (viii) sense. Of late, I had a close (literally "close" because of its very very small type-face) look at the *Compact Edition of the Oxford English Dictionary*. Some of the entries under Reason are interesting and worth quoting.

1.1. The Statement of some fact (real or alleged) employed as an argument to justify or condemn some act, prove or disprove some assertion, idea or belief;

2.a. To give, yield or render reason : to give an account (of one's act or conduct);

3. A statement, narrative or speech; a saying observation or remark; an account or explanation or, answer *to* something;

3.b. A fact, event or incident as a subject of discourse;

II.5. A fact or circumstance forming, or alleged as forming, a ground or motive leading, or sufficient to lead, a person to adopt or reject some course of action or procedure, belief, etc;

6. A ground or cause of, or for, something.

a. Of a fact, procedure or state of things, in some way depending upon human action or feeling;

b. Of a fact, event or thing not dependent on human agency;

7.a. By (or for) Reason of, on account of;

8.b. To have reason for, or to do, something;

III.10. that intellectual power or faculty...which is ordinarily employed in adapting thought or action to some end.

c. In the Kantian Transcendental Philosophy : The Power (*Vernunft*) by which first principles are grasped *a priori*, as distinguished from UNDERSTANDING (*Verstand*).

21. The way, manner, method

v.2.d. To employ reasoning or argument *with* a person, in order to influence his conduct or opinion.

3.b. *From* (premise or data)

5.b. To explain, support, infer, deal with, by (or as by) reasoning.

Careful analysis of the meanings of *reason* quoted above shows that they are understandably in accord with the usages of the term in the English-speaking world. There is no denying the fact that *reason* and *cause* are interchangeable in many contexts. In some cases, *cause* stands for intention or motive. The interchangeability or otherwise of these terms can hardly be legislated by philosophers to satisfy their theoretical needs or inclinations.

It seems to me that many philosophers, otherwise willing to be fair simultaneously to the demands both of commonsense and science, feel somewhat disinclined to accept the commonsense view that *cause* and *reason* are indistinguishable or interchangeable in the context of explanation of human action.

Undeniably, in some cases, *reason* does perform the role of *cause*. However, philosophers are not ordinarily happy only with some cases. They want to develop or have a general theory, preferably without *any* disturbing exception. The reason for this demanding situation is not far to seek. Most of the working present-day philosophers have some familiarity with the nature and role of causal laws in hard sciences like physics. Many of them have a definite intention to make philosophical discourses as "scientific" as possible. At the same time, they are aware of the peculiarities of the cultural sciences, primarily concerned with human action, valuation, choice and preference. Further, philosophers of the "idealistic" persuasion have been persistently highlighting the importance and uniqueness of *free* human actions. Anti-holist and/or pro-libertarian economists and political scientists are raising ideological questions in this connection and trying to show that,

rightly understood, human action falls beyond the causal domain (of Nature).

This statement of the problem-situation is quite reminiscent of the old and long debated question whether *generality* of causal laws and the *uniqueness* of historical events are complementary to each other.

The debate is not likely to prove interesting unless we draw first a distinction between *action* and *event*. Actions may be events. "Caesar crossed the Rubicon", "Buddha left kingdom in search of spiritual solace" and "The Red Army defeated the Nazi forces under Paulus at Stalingrad" are all *statements* of actions. Without offending the norms of using ordinary language, English in this case, one might say that the actions, individual or mass, *referred to* in the said statements are events,—past events. In order to refer successfully we need to be sure of the *identity* of the referent. While action may be regarded as event, and successfully described and referred to, all events are not action-like and not amenable to the sort of causal treatment usually resorted to for the purpose of explaining actions. For example, (if Kant-Laplace hypothesis regarding the origin of the earth is correct) it was an astronomical event that a portion of the sun came out of it due to the attraction of a big passing star and got fragmented and started moving around it according to the well-known laws of celestial motion. That this *was* an event is scientifically well-established and can be successfully referred to even *now*. It is the identity of the event which enables one to refer to it repeatedly. It is an example of an event which is *not* action, at any rate not in the sense I am using the term. In hard sciences, *event* is often used as a synonym of action. For example, when it is said by a physicist that every natural action gives rise to a reaction according to some definite laws, he is implicitly assuming that action need not be differentiated from event. And it is said to be a standard and respectable way of using the term *action*.

Some actions are essentially human and causally explainable in one particular way, whereas other actions or events, which are essentially natural and have little or nothing to do with human agency, are not amenable to the said sort of causal explanation. Still if we insist on using the term "causal explanation" in both the cases, we are logically obliged to draw a distinction between the two. The forms of causal explanation of action performed by human agent are bound to be different from those of the events which *take place* or *happen* and are not brought about or produced by any human agent. The presence or absence of human agency may be regarded as the differentiating factor between the said two sorts of explananda. The concept of agency as such may not prove adequate. If all free human agents act identically in indetical situations (let us assume for the time being that it is possible to describe these situations from the impartial standpoint of the Laplacean demon or the Leibnizian God), it would be logically impossible for us to ascertain which ones of the said actions are due to them and

which ones to the attending situations. Unless it is assumed that agency is *directional*, i.e., human beings are able to follow certain courses of actions, avoiding or rejecting others, we find it difficult to explain such very common human phenomena as clash of private interests, class-conflict, war, etc.

To put the problem in a different way, the identity of the actions to be explained are not due to the structure(s) of their explanation—how we explain them. The ontology of actions—actions distinguishable from natural events—is to be accorded a position which is independent of the methodology of explanation used to account for it.

This is the point on which philosophers inclined to phenomenology and existentialism differ from those committed to some or other forms of physicalism or causalism. The difference between Heidegger, Sartre, Gadamer and their followers, on the one hand, and Quine, Smart, Davidson and their followers, on the other, hinges on the question whether or not the ontology of *human* actions is essentially different from that of natural event. According to the former, the ontology of action has an inalienable *axiological* core in it and which resists its subsumption under or identification with the ontology of event. It is not surprising to note that Quine finds no difficulty in identifying action or transaction with the physical objects consisting of the temporal segment or segments of the agent or agents for the duration of the concerned action or transaction.⁴ The “liberal notion” of physical objects entertained by Quine and the like-minded philosophers is intended, among other things, to account for personal identity of human agents and of their actions in terms of causal continuity. In other words, to them the notions of agency and freedom are easily amenable to causal treatment and the rules of regimented language. Their concern with the *logical forms* of action-sentences rather than the contents of action and their peculiar features is understandable. They are basically interested in formulating the logical forms of actions in such a manner that it can capture the senses of what is called to be content of action.

It is true that if we look at the entries under “reason” quoted earlier we will often find terms such as “fact”, “event”, “circumstance”, “ground” and “cause”. But at the same time it is to be noted that in ordinary language reason is also often associated with terms such as “power”, “manner”, “ability” and “understanding”. I do not deny the possibility of assimilating, at least partially, senses of the latter group of terms under “liberal” ontology of events and physical objects, disregarding the claim of the *basic* nature of the notion of human *agency* and the *axiological* character of action. My feeling of uneasiness over the problem is this. The said liberal ontology is too liberal to capture the intuitive nuances of the complexity of the concept of action. It is undeniable that the logic of verbs and adverbs propounded by the logicians of the Quinean persuasion can capture some obvious and behavioural features of human actions. But one feels that some not-so-

obvious and yet persistent features of actions are left untouched by the said logic.

It is interesting, in this connection, to follow the considerations offered by Charles Taylor against the exaggerated and untenable claim proffered by the physicalist. For example, his arguments defending the notions of human *agency*, the *self-interpreting character* of human animals, and the rootedness of *basic-meaningfulness* of language— all human languages— in human nature are intended to show the inadequacy of the event-ontology of the physicalist. Positively speaking, Taylor taking the cues from Heidegger, Gadamer and Sartre, proposes to establish that physicalist type of causal explanation proves unsatisfactory, particularly in the field of value-discourses like aesthetics, or creative arts, ethics and economics. In the cases of economics, we are assuming the praxiological views of economists like Von Mises and Hayek and ignoring, for the time being, the arguments of the positive economists like Friedman and Lipsey.

Both historically and conceptually speaking, this debate goes back to the times of Descartes, Hobbes and Locke. It was revived in the second half of the eighteenth century by the French materialists like Diderot, La Metrie and d'Holbach, on the one hand, and Rousseau, Kant and Hegel, on the other. In the middle of the last century this debate was raised, in different forms, by both Mill and Marx. It is very interesting to note that both of them were obliged to take a rather ambivalent position on this extremely important controversial issue. The utilitarian Mill, under the influence of Comte, was very much in favour of assimilating human sciences under natural ones, but his careful study of the psychology of human behaviour convinced him that it would not be an easy or even desirable undertaking. Having formulated his inductive methods of scientific inquiry, he realises their inadequacy, when he comes to the methodology of what he calls the “moral sciences” (meaning social sciences). He confesses that the methods useful for the discovery of causal laws do not apply to social sciences because of the *plurality of causes* and the *inter-mixture of separate effects* which are at work. Consequently, he advises us to adopt the “concrete deductive method” and the “historical or inverse deductive method”. The predicament of Marx is equally interesting. Firmly committed to materialist ontology, inverse (i.e. anti-Hegelian) dialectical method, and the view that individual human beings are the basic authors of history, he desperately tries to reconcile the notion of *inexorable* “laws of economic motion”, on the one hand, and the freedom of the individual, on the other.⁵

In view of the considerations which weighed rather heavily with Mill and Marx and their refined statements, methodological monists like Popper and Hempel try to show that the *logical structure* of natural events and human actions are identical *at bottom*. According to their what is called Covering-Law Model(s) (CLM), (E) the explanandum is deductively or statistically derivable from two sets of explanans, viz. (I) explicitly stating or impli-

citly making use of a set of laws or hypotheses or everyday commonsense generalisations or a mixture of all these, and (G) describing the initial conditions or the circumstances attending the explanandum. The said (E) may be a statement of human action or natural event. Its explanation consists in its *derivability* from the statements of its covering laws and attending circumstances, i.e. (L) and (G).

The main criticisms raised against this model (CLM) of explanation may be counted thus: first, it fails to take note of the distinction between ontology of human actions, marked by the freedom of the individual agent and the resulting uniqueness of actions to be explained, and that of natural events subject to the uniformity or limited variety of causal or quasi-causal statistical laws of nature; secondly, because of its structural generality and its inherent rigidity, CLM fails to address itself to a specific human action and it is always concerned only with a *class* of human actions and not with any *specific* human action; thirdly, this model is *abstract*, condemned to be *sketchy*, and lacks in the richness of the explanations generally available in human sciences; and finally, CLM, originally meant for hard sciences like physics, if applied to human sciences, makes the latter get straight-jacketed and liable to aping scientific method in the field of humanities.

In fairness to Popper and Hempel it has to be admitted that their later formulations of CLM(s) have taken note of the said criticisms and been presented with added precision and clarity. Popper, for example, has expressed himself against uncritically borrowing scientific method and applying it to the domain of social sciences. In the case of the latter, he suggests the necessity of using what he calls zero method. By it he means "the method of constructing a model [situation] on the assumption of complete rationality...on the part of the individuals concerned and estimating the deviation of the actual behaviour of people from the model behaviour using the latter as kind of zero-coordinates".⁶ Undoubtedly, this method highlights the role of reasons entertained by the agents of action in a given situation and also succeeds in retaining the distinction between the *inside* and the *outside* views of reasons. Sometimes, this method has been referred to as situational logic. But it is to be understood that no situation has a unique logic of its own which directly enters into the structure of the action to be explained. For, if that is admitted, it runs counter to the libertarianism and the anti-determinist orientation of Popper. Secondly, this zero method is abstract and artificial. Thirdly, it leaves unstated the laws or/and trival commonsense generalisations which are used to piece together the elements of the situation (e.g., individuals, their beliefs, actions and societal presuppositions) into a whole. Besides, because of its constructivist character, the explanatory situation is bound to be sketchy, somewhat *ad hoc* and thin in its descriptive content. Finally, one may plausibly raise the old criticism against Popper that his zero method is just a camouflaged CLM.

It is clear that Popper wants to preserve the primacy of the notion of

free agent and at the same time retain the hidden lawfulness of the world as a whole comprising both natural and cultural events. CLM and situational logic differ only in emphasis and complexity. Situation as an explanatory model emphasises the complexity and the interwoven character of human actions and their attending circumstances. It relegates the role of laws to the background. But laws are there nonetheless. Without laws the descriptive statements of the action-attending circumstances are not relatable by themselves. Circumstantial pieces of information are glued together by laws. *Pure* description or *pure* narration without covering laws is a myth. Laws provide the needed link between nature and culture and the main defence of methodological monism. In other words, intelligibility or rationality of human actions is contingent upon accordance of concerned actions with, and derivability from, law and law-like statements.

The above approach wants to confer scientific respectability on human sciences and is, simultaneously, interested in a theory of truth rather than in the problems of rationality which is the main concern of social scientists. It is of some interest to recall here that causalists like Popper and Davidson are committed to the Tarski's theory of truth and have been trying to apply it to the statements of ordinary language. This commitment of theirs puts them under an added obligation to defend a thick ontology of events as distinctly and repeatedly identifiable referents.

Long back Vico persuasively argued that human sciences like history can hardly achieve more certainty in their explanatory accounts than the certainty which is available to their authors as human beings. In his *New Science*, he tries to show that *outside* accounts of all socio-historical events framed in terms of laws are destined to prove abstract and unconvincing and that we have to reconstruct rationally those events from *within* in terms of the ideas and actions of the concerned human beings. To understand a past event, according to Vico, the social scientist is called upon "to throw himself into the mind" of the concerned men and try to *recapture* their ideas and actions. Explanation is a sort of understanding-cum-interpretation: but its structure is not marked by some culture-invariant natural laws. It is to be recalled here that Vico was writing his *New Science* (1725) when the influence of anti-historical Newtonian new science was enjoying almost universal acceptability. He was the first professional philosopher who painstakingly argued against the method of "intellectual abstraction" in human sciences like history. It does not help us in understanding social phenomena which result not only from men's reason but also, perhaps in a greater measure, from their "impulse, passion and imagination". Vico's was a very delicate and difficult undertaking. It was to explain (in the sense of understanding) not only the happenings of social events but also the birth of poetry. In brief, he was clearly in favour of what may be called the *hermeneutic* method of imaginative interpretation or reconstruction of human action.

Like Vico, Croce also came from Naples. Croce's thought bears the influ-

ence of both Vico and Hegel and thinkers known for their pro-historical orientation and critical disposition to anti-historical thinkers like Descartes and Kant. Unfortunately, Croce was more influenced by Hegel's panrationalism than Vico's method that aimed at understanding distant and alien cultures, including their so-called irrational factors. For Hegel, anything *irrational* is due to "the Cunning of Reason" itself and cannot be *rationaly* accounted for at all. Referring to historical development, Hegel observes that it "is not of such a nature as to be tossed to and fro amid the superficial play of accident, but is rather the absolute arbitrar of things; entirely unmoved by contingencies, which indeed it applies and manages for its own purposes". Cleopatra's nose or Asoka's compassion has no place in his historiography. For "contingencies" are only apparent and due to the said Cunning of Reason. Hegel's explanatory units are peoples or the totalities of individuals and not individuals themselves (in their societal network). If CLM proves inadequate to explain irrational events and actions because of its overreliance on abstract natural laws, Hegelian panrationalism proves unpromising in the same context because of its metaphysical commitment to rationalistic metaphysics and methodological holism. Against this backdrop one has to understand Popper's defence of methodological individualism, which prescribes that social events are to be explained in terms of individuals, their beliefs, actions, and their societal presuppositions. If the primary historical or social agency is attributed to human beings and not to some super-human and infallible God or totality, the passions, fantasies and even unreasons of the former can perhaps be comfortably accommodated within the framework of the proposed anti-naturalist form of explanation.

In spite of his insightful Vician inspiration and libertarian orientation, the metaphysics of Hegel unduly influenced Croce and, to my mind, somewhat adversely affected his theory of social explanation.

The historical web, which is and is not a work of individuals, constitutes...the work of the universal spirit, of which individuals are manifestations and instruments.⁷

[The Universal Spirit] which continually resists the seductions whereby practical interests try to interrupt or mislead the logic of truth of liberty and labour ceaselessly to transform blind passion of the individuals into enlightened will and actionthere is no need to fear that the order of things will collapse or that the world will come to an end.⁸

Evidently, the metaphysical presupposition of Croce's libertarianism takes it closer to Hegel and away from Popper (the methodological individualist). In this respect, my sympathy lies with Popper. But the main reason for which I refer to Croce is this. Following the spirit of Vico's *New Science*, Croce was one of the few historian-philosophers who realised and pointed out the poverty of CLMs and their sterility in the context of human

sciences. Coming to the question of the structure of historical explanation, he clearly affirms that for the purpose of explanation what we need is the *continuous and concrete description* of the events or actions to be explained. In this explanatory description there is no place for laws. Introduction of laws makes historical description scientific and abstract in the bad sense. Historical events or human actions form a plenum. Laws create gaps where, in fact, there is none. Croce's account of historical explanation may safely be extended to other human sciences. He thinks that *narrative account* of the events to be explained is the best possible explanation of it.

Croce's view influenced both Collingwood, Oakeshott and Walsh and, mainly through them, philosophers like Gardiner and Dray. They have one negative point in common, namely, the rejection of CLM. Besides, they favour what is called Continuous Series Model (CSM) which, in effect, is a reiteration and refinement of the Crocean view referred to above. The crux of this view is: social explanation has to be construed in terms of beliefs and actions of social individuals and the scientific notion of causal laws must not be given any place in it.

Gardiner and Dray have also taken serious note of what is called dispositional account of explanation. Ryle thinks that "to explain an action as done from its specified motive or inclination is not to describe the action as the effect of a specified cause. Motives are not happenings and are not therefore the right type to be causes". While the Rylean dispositional account is admittedly anti-causal, its historical and conceptual lineage has to be sought in the direction of Mill and the later Wittgenstein and not that of Croce and Collingwood. Although he succeeded the last named's Waynflete Chair at Oxford, they had almost nothing in common except perhaps anti-scientism. It is to be observed, however, that the philosophers who think more in terms of problems rather than in terms of their school-affiliation, often prove, in their findings, strikingly similar.

The Rylean form of dispositional analysis is mainly defective on the count that it does not sufficiently recognise the *occurent* character of social events. The social scientist is not mainly interested in a disposition underlying a particular action. His main interest is in the *particular* action itself. Its underlying disposition may or may not eventuate or culminate into an action. Dispositions only tell us the possibility of occurrence of events along a particular line. They do not tell us of the occurrence as such. To try to account for murder of a person in terms of the murderer's disposition is not concrete or convincing. In addition to the said disposition, some more additional informations regarding the murderer, the murdered, and the situation of the murder are to be made descriptively available.

This criticism against dispositional explanation may also be invoked against law-governed social explanations of the CLM-type. The important difference between disposition-grounded explanations and the law-governed ones is this. While laws have their *descriptive* structural contents, dispositions

do not have the same. Their function is quasi-causal. "They narrate no incident. But their jobs are intimately connected with narratives of incident, for, if they are true, they are satisfied by narrated incidents".⁹ Dispositional statements are neither fact-reporting nor deviable from laws. They are like inference-tickets that show how, with the help of licenses or tickets, we can infer one particular event from another and repeat this performance. Dispositions, making this repetition of performance possible and making the same intelligible, are not laws in the sense of being disprovable or testable. The Millian inspiration of this doctrine is unmistakable.

Several philosophers, political scientists and economists have tried to narrow down the gap between CLM and CSM. Notable among them are Isaiah Berlin, Gardiner, Hayek, Peter Winch, Leo Strauss, Nicholas Rescher, C.B. Joynt, O. Helmer, Michael Scriven, and Charles Frankel.

First, both Garbner and Berlin concede that historical explanations make surreptitious use of commonsense generalisations. Since these generalisations are obtained from ordinary language and since ordinary language has no concept of well-defined law in it, historians, they argue, have nothing to do with the laws used by scientists. History is written in ordinary language, i.e., has no vocabulary of its own, and it is understood in the form or web of that language. Besides, ordinary language is often found to be *evaluative*. Laws, as used by scientists, have nothing to do with the evaluative statements. These arguments are intended to show that (i) CLM in its rigid form is of no use to social scientists and (ii) the role of generalisations in social explanation is undeniable.

Secondly, both Hayek and Winch recognise the evaluative character of ordinary language and the generalisations found in it. They do not reject the CLM even if evaluative generalisations enter into the structure of social explanation; but because of their looseness and vagueness, the sort of explanation they yield can hardly, they contend, be regarded as satisfactory. Even this criticism against CLM proves somewhat weak if we remember Hempel's conciliatory view that in socio-historical explanations our aim is rather modest, i.e., only to produce *explanation-sketch* and not full-fledged, logically neat and structurally tight, explanation.

Thirdly, another objection that has been raised against CLM is rooted not in the nature of ordinary language as such but rather in that of social events. Social explanations in terms of laws, universal or statistical, fail to account for the contingent features of the events. True, statistical laws are slightly better off than universal laws in this respect; even then one must admit that to qualify cause-effect relations by such terms as "ordinarily" and "usually" do not satisfy our expectation in social sciences. To account for the mere possibility, statistical or otherwise, of a *specific* event is not what one expects of the historian or other social scientists. This is the point which is fully exploited, among others, by Collingwood, Oakeshott and also Dray. I say "also" with reference to Dray, because on occasions he gives the imp-

ression that distinction between causal and dispositional explanations has been exaggerated and that the said distinction "should...not be drawn in such a way that dispositions as such are denied causal status".¹⁰ According to him, "reasons...can be causes". This view is perilously close to the naturalist line of thinking, unless, of course, one qualifies it, like von Wright¹¹ by saying, in effect, that it all depends how we use the terms "cause" and "action" —narrowly or broadly.

Fourthly, Scriven's argument fully exploits the vagueness and looseness of the so-called laws used by the social scientist in his explanation. Truisms which are called upon to lend explanatory glue to the descriptive details of historical explanations are of a logical hybrid kind. These generalisations can take care only of the standard or normal events falling under them. When the latter prove somewhat deviant or erratic, these are of no or negligible use. Consequently, explanations constructed in terms of everyday truisms are only inexactly understood because of their inherent complexity.

Fifthly, it has been rightly pointed out that socio-historical generalisations used in explanations are limited or circumscribed in character. Within the said limitations these laws envisage no counter-example. And there lies their explanatory power. But Popper pointed out that circumscribed generalisations, strictly speaking, are existential in import and, therefore, their proclaimed explanatory power is highly questionable, unless, of course, it is assumed that, the same limiting area covered by generalisations may have within it both pro- and anti-evidence.

The fundamental difference between the causalist and the rationalist in the context of social sciences centres round their ontology of man or/and mental events. The causalists I have in mind are firm believers in physicalism and the primacy of natural sciences. The philosophers of Quinean persuasion are understandably eager to purge ordinary language of the "misunderstood" remnants of mentalism. "Mental entities are unobjectionable if conceived as hypothetical physical mechanisms and posited with a view strictly to the systematising of physical phenomena. They should be posited in the hope of their submitting someday to a full physical explanation in turn".¹² This approach to mental phenomena is bound to remind one of the Comtean positivist programme of the early nineteenth century. It is instructive to recall here that Comte who first coined the term *sociology* had initially used the term *social physics*. To him, as to the physicalist of the present day, sociology is nothing but social physics. The latter would like to see that the mentalist underpinning of value (axiological) words is totally removed or shown to be otiose and that behavioural or quasi-behavioural account is offered of hedonic concepts and idioms. For example, "pleasantness is" for Quine "an attribute of bodily episodes, manifested in behaviour". He approvingly refers to Holt who "pictures pleasantness and unpleasantness in terms of harmony and conflict of motor impulses".¹³

A somewhat similar attitude is evident in Smart's image of man. He tries to show the essentially homologous character of a computer and a human brain. Arguments are offered at length "to refute" the view that "determinism is incompatible with free will". This view, according to Smart, rests on the false assumption that "if determinism is true, our assertions occur only because of *causes* and not because they are based on *good reasons*". He argues to show the fallacious character of the supposition that "acting from causes and acting from reasons are mutually exclusive". This line of argument is bound to remind one of Davidson's refined version of the view.

In the process of pressing and further clarifying his physicalist ontology of man and human action, Smart rebukes Kant who once said that what man knows, wills and hopes depends upon what he himself *is*. This anthropological orientation of his philosophy apparently offends the scientific temper of Smart and his fellow physicalists. To them "Kant's so-called Copernican revolution was really an anti-Copernican counter-revolution". For, while the scientist tries "to see the world in a truly objective way and... man is in no sense at the centre of things", Kant presents an opposite view. He seems to set man over against nature. This so-called anthropocentrism of Kant is totally unacceptable to Smart. He asserts: "Man is a part of Nature, a very wonderful part of Nature perhaps, but not necessarily pre-eminent in any way". He finds no incompatibility between his version of materialism and his commitment to utilitarian ethics.

Some physicalists try to show that some or other nomic regularity often named as law of Nature is at work behind human action. They find no incompatibility between the genesis of action in intention and the intelligibility of it by its description. For example, my action of folding hands is explained (in the Indian context) by my utterance of my intention to pay respect or extend courtesy to someone. The mental state of "intending to pay respect" is said to be a grounding brain-state and it has to be re-described as such. But, while the mental state is re-described, care should be taken to see that the concept of "paying respect" or "extending courtesy" does not appear in the re-description. For, the content(s) of description and re-description are co-referential. This logical strategy is advised obviously for preserving referential identity. The intention is recognised as an adequate explanation of the action—provided there is a sortal or typal co-relation between referent of the re-description of the intending mental state and that of the re-description of the acting state. This co-relation is ensured by some nomic regularity or law of nature.

In some forms of this sort of causal explanation the notion of causal power of the agent is recognised, while in some other forms it is missing. Causal efficacy is made to disappear by reducing it to attitudes, wants, etc. and their driving force, on the one hand, and the regularity of natural law, on the other. This sort of causal explanation, in a slightly amended form, tries to cluster together three things: laws giving structural description of

the conditions under which agents perform intentional action; to formulate the concept of freedom to act, showing it as causally efficacious, and a causal analysis of intentional action.¹⁴ Laws stating causal antecedents of an action by themselves cannot ensure the occurrence of a particular consequence; for, it is not possible to anticipate which one of the possible particular consequences will, in fact, occur or be realised. The crux of the question is: What makes the realisation or occurrence of a particular consequence, say, an action, possible? Is it some human agent? Or, is it due to the nomologicality of natural laws? The physicalist's account of causal explanation bypasses this question. Because, it is said, there is no nexus between intention and action, and, therefore, to undertake a search for it is logically uncalled for. In effect, it is a revival in a refined form of Hume's argument on the non-availability of any experienceable connection between cause and effect. The plausibility of the analysis purported to show that singular causal statements are backed up by laws by a re-description of their reference depends on the questionable assumption that event-identity is preserved under the re-description. If the said regularity ascribed to law is really Humean in character, there is no productive process *connecting* intention with action. To say that the lack of connection is made good by re-description of the attending circumstances of action is not to meet the main point of criticism often raised against the Humean position. Further, description of action-attending circumstances may at best prove *necessary* but not sufficient for conferring causal dignity on such mental states as intention, want or pro-attitude "underlying" the action-explanandum.

In order to designate reason as cause, the physicalist is called upon to explain interpersonal communication within a community and, therefore, has to introduce the role of language in this connection. To understand why someone is doing some particular action, others need to understand what he has to say on the subject. Because of his behaviourist commitment, overt or covert, he is obliged to concede that thought depends on speech. Thought itself is understood in terms of a system of beliefs. One's thought is understood by others by interpreting it from one's speech. Thought can be credited to be reason for action provided it leads all to do the same sort of action. If a particular thought leads one to do one sort of action and others to quite different sorts, invocation of thought as reason *qua* cause is of no use. To put it differently, thought can be regarded as cause, provided we assume a regular connection between the two. Further, it is necessary to assume that the rules of interpretation of one's thought "as expressed" in speech must be same and equally usable and available to others of the same community.

To attribute thought to a man is intelligible in terms of the *interpretation* of that thought as evident in his speech. This presupposes *expressive power of language*. But the physicalist is not prepared to recognise that the expressive power of language may at times defy the rules of interpretation accepted by a community. If the rules of interpretation are universal, uniform and

time-invariant, it is difficult to explain how creativity in language can be suitably accounted for. The physicalist's theory of interpretation, like his theory of action, is primarily motivated by identity-preserving considerations. For, otherwise a theory of creative interpretation raises some difficult problems for those who are committed to strong correspondence theory. The physicalists who espouse Tarski-type correspondence theory of truth encounter a number of problems to apply it to ordinary languages as distinguished from the formalised languages, where the rules of interpretation are very complex, local, and fast-changing. The later Wittgenstein's inclination to coherentism is to be understood in the light of the said difficulties.

I am reminded by Gadamer, in this connection, of "the incommensurability of thought and being" defended, in different ways, by philosophers like Hume and Kant.¹⁵ Perhaps, mainly due to the influence of science and mathematics of the period, the influential thinkers of the eighteenth century were disinclined to commit themselves to the old representational theory of knowledge. Hegel and Herder ingeniously tried to introduce the spirit of history in their theories of language. The highly local and changing characters of it could hardly be understood without due recognition of its historical nature. In effect, Hegel and Herder injected history in human sciences and pointed out the limitation of the Cartesian structural approach to linguistics.

However, it was left to Dilthey's theory of human sciences to show that the intelligibility of human actions is primarily due to their historical continuity and not structural continuity or causality. According to him, meaningfulness of human action is not a logical concept but has to be understood as an *expression of life*. He observes: "Life and history have meaning like the letters of a word". In other words, according to him, the world of history is to be treated as a text and deciphered sympathetically and carefully. Interpretation or deciphering is not an abstract rule-governed exercise. In many ways, he anticipated Derrida.¹⁶ It is deeply rooted in the life of the individual historian or social scientist, who is engaged in the exercise of the necessary interpretation. In brief, in human sciences every interpretation involves *self-interpretation*. The human scientist dealing with a text and called upon to explain a human action is somehow required to interpret it in a way where to his self-interpretation is inextricably linked up. Other-interpretation and self-interpretation are interwoven in human sciences like sociology and history. The concept of the "life-world" is central to this methodology. It is the antithesis of the sort of objectivism defended by the physicalist.

Both Dilthey and Natorp were trying to grapple with the problems of the unity of, and successful communication within, a community without invoking the Kantian concept of transcendental self or some such thing. Dilthey spoke of the "unity of life" and "the standpoint of life". Apparently, Husserl was influenced by their ideas. His concept of "conscious life" anticipates his subsequent view that all intersubjectively valid scientific dis-

courses must study not only individual experiences of man but also their underlying intentionalities. It is in this way that the *totality of expression and action* becomes intelligible more or less alike to all men. Husserl's "conscious life" is not passive. It is what he calls "productive life".

The plausibility of this argument, Heidegger argues, hinges on self-givenness of experience and an implicit exploitation of the Kantian transcendental argument. He is not in favour of using either the concept of "unity of life" of Dilthey or that of "standpoint of life" of Husserl. He rejects Husserl's notion of eidetic reduction based on the presupposition of the distinction between fact and science.

The universality of fact that Heidegger is interested in establishing is not rooted in anything transcendental. It is essentially a historical concept. His concept of man as *Dasein* is developed solely in terms of time. He interprets being, truth and history in terms of temporality. To show the radical character of his rejection of transcendentalism, he goes to the extent of affirming that being itself is time and everything claimed to be transcendental is an abstraction from it. Heidegger's criticism of Husserl and Kantianism seems to be grounded in Nietzsche's criticism of Platonism. It is true that Heidegger's basic objective in developing his theory of man is not to lay the foundation of the human sciences or to reconcile the seemingly divergent streams of historical rationalism and structural rationalism defended by Hegel and Husserl. He finds that the very nature of man-temporality—provides the unity of what is humanistic and what is scientific. To him science is not a fact-fetish. Its main objective is to clarify and concretise the idealisation of abstraction that is given in science. But scientific activity is to be understood as a form of "productive life". It is motivated by an urge towards universal acceptability. The intentionality underlying scientific research is to achieve a universal life or community. With him understanding is not a gift of nomic hiddenness of nature but an achievement of the active nature of the human mind. The possibility of co-sharing scientific knowledge is not grounded in its testable lawfulness.

Heidegger tries to show that the intelligibility of natural events does not lie in the events themselves but in the basic clarity of the human phenomena,—the phenomena in which the human being immediately articulates himself. The foundation of language is said to be discourse or talk.¹⁷ In talk man does not express himself. Talk is itself expression. I.e. it is not to be taken as vehicle or instrument of expression. Discourse is not incidental to expression; it is essential. The human states of mind, which are necessarily *self-interpreting*, are equiprimordial with the acts of understanding. The Humean problem of how to connect the elusive mind with its expression in human behaviour does not arise in Heidegger's scheme of thought. Besides, the question of interpretation of language, according to him, is not external to language. The latter always carries within itself the cues of its own interpretation. One might even say: language is essentially *self-disclosing*. Its

disclosure does not need an alien interpreter. Language is "rooted in the existential constitution of man's disclosedness". Intelligibility of an action, especially discourse, lies in the action itself, "Discourse is existentially equi-primordial with the state of mind and understanding."

It is instructive to note that the problems which bother the physicalist were anticipated by Heidegger and his predecessors in pretty details. The phenomenologist's account of how to remove the gap between thought and language, how the meanings of language are shared by the members of a speech community, how and to what extent interpretation affects the contents of discourse and like issues, appears to me closer to our daily intuitions. For example, it seems clear to me that whenever we talk something, "something" is not alien to or an external adjunct of talking. It is not that we talk and what we talk are quite separate things. In talk, they - "talking" and "something" - have a unity of life. Talk and its contents are inseparably together in talking. Talk proves successfully communicative because of its self-articulative character and not due to any truth-ensuring rules of interpretation. "The phenomenology of *communication* must be understood in a sense which is ontologically broad". In talk, I place myself outside myself and for otherselves.

If this account of communication and explanation of how my action of talking becomes intelligible to others is acceptable, we are spared of the tortuous, abstract, analytic and counter-intuitive devices suggested by the physicalist for the purpose of explaining human action. Cause or reason of my action is not external to me. It is neither external as a push from backward nor a forward pull. It is not external even in the sense of cluster of descriptive details. The ontological identity of my action is something which does not demand any public demonstration or proof. That is a demand peculiar to scientific objects. The need of search for publicity presentable cause of action is just not there. Why do we undertake this exercise at all? Action is itself expression. If it is not expressive, I do not see how by pointing to an antecedent cause, or a subsequent *teleos*, or by describing some informations co-existent with it, or a combination of all these, it can help us to explain it.

In a way both Hume and Kant encountered this problem. Both of them examined the question whether the notion or category of cause we make use of in ordinary and scientific discourses is *within* us or *without* us. Both answered "within us". And both denied self-causation. With Hume it is associated with accepted and expected customs and habits based on previous experiences, personal and collective. With Kant it is a category and universal in scope. But both these views accord well with the physicalist's approach to the question of causation. For, they commonly hold the view that the cause that explains an event or action is not *in* the latter but lies *outside* it. Once cause of action is placed outside it, we have to face the problem of *how* it makes the explanandum possible and intelligible. Co-existence and

co-variance of cause and effect are not necessarily explanatory. It is true that the attending details of an action adds to our understanding of it. The question remains: (a) is it due to the fact that the said details are already part of, or constitutive of, action? or (b) do the former give rise to or produce the latter? If the two are ontologically unrelated, I do not see how their logico-structural juxtaposition can prove or perform the explanatory role. The nomic underpinning, if any, can hardly do the job.

Action is the opening-up of man to other men and the world. Man is in what he creates, what is due to his creative activity. The root of action is the will to have or, in Sartre's word, desire. Desire, in turn, is due to man's imperfection, a sense of lack. So long as we live, we are never entirely free from this sense and the resulting actions—a ceaseless flow of actions.

When Sartre says, "what I create is still me", he is rephrasing Heidegger's Being-there: i.e. man's action puts him out of himself and that is what sustains him. Cessation of action deadens or ossifies its product. It is in this context one has to understand the later Sartre's concept of practico-inert. The result of praxis or action becomes inert when it is not reinforced by further action. Rightly understood, "man is sum of his actions". This account of human action, to my mind, shows *how* action becomes possible and also intelligible at the same time.

The physicalist account of the cause of human action suffers mainly due to its inability to grasp the *peculiar* ontology of human action and socio-historical events. This inability, in turn, is due to his rather uncritical commitment to a reductive method, marked by his desire to assimilate the model of explanation of *human* action under the model of the explanation of *natural* actions or events.

Our "explanation" of human action is invariably an act, or set of acts, of understanding. I think, with Gadamer, that every understanding involves interpretation and that every interpretation is bound to differ from other interpretations. Once the irremediably differential character of interpretation is adequately recognised, the physicalist's anxiety to evolve a methodological strategy for preserving the identity of human action turns out to be of secondary importance. The sort of identity which is preserved through the explanatory causal structure is putative and not original. When I say this I feel no hesitation in admitting that the ontology of human action and its evaluative character can well be accommodated within the world of science governed by general laws. The generality that marks the laws of science is not antithetical to the unique features-preserving ontology of action. I am yet to be convinced by the arguments of the determinist cosmology; even their formulations appear unclear to me. But I do not go into that large question here, although I agree that it has some relevance to the issues under discussion.

Reasons which explain action best are all man-made. May be these reasons are often, on scrutiny, found untenable. This is to say that laws of

nature as found in books on science have no say in the forms and formulations of reasons which explain action. Scientific laws enter into social explanation *via* human understanding and interpretation. This may sound truistic. But there is a point here which one often misses and consequently gets bogged down in the problem which is now engaging our attention.

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Are Naturalism and Humanism Historically Antithetical?

THE QUESTION owes its origin to more than one source.

First: There is a well-known *tradition* of philosophical view drawing a rather sharp division between matter and mind, between material thing and mental being. Material thing has been variously defined: (a) in terms of extension, (b) in terms of subjection to causal laws, (c) in terms of hard and indestructible particles, (d) in terms of transformable energy and so on. I say "and so on" just to indicate that other views of matter are also available. Some of these views on matter lend themselves to monistic interpretations and some to evolutionary-gradualistic. The third view insists on the dualism between matter and mind or nature and man. The last view gives the impression that human nature has nothing to do with material nature. To put it differently, an antithesis between humanism and naturalism is affirmed.

Secondly: the question regarding the place of nature and man in history is full of *conceptual* anomalies. Is history rooted in nature? Is history the *human* level of *natural* evolution? Is history subject to the laws of nature as evident in the processes of evolution? Besides these, some other questions may be raised very pertinently here. Is history an autonomous, i.e., purely human, phenomenon? Can history be satisfactorily understood without reference to this or that particular natural, i.e., geographical and climatic, setting? To what extent can history be, if at all, separated from geography, without distorting its full human significance? Is it very interesting to speak of history in *general* or world-history (as Hegel, for example, used to speak of)? Or, are we not rationally obliged to speak of history in *particular*, i.e., describing the specifics of a given human culture?

It does not demand of us much analytic acumen to point out that these questions are due to some basic conceptual misunderstanding. For example, if history is deemed to be a process *integral*, intimately related, to that of nature, its claim of autonomy has to be either given up or, at any rate, considerably diluted. But the assumption of the lack of relation between history of a particular country and its geographical setting is highly counter-intuitive. One has to be very cautious at this point. For the opposite view, viz., the history of a people is a function of its natural or climatic conditions,

is equally implausible. Unfortunately, some well-known thinkers like Montesquieu have espoused this pro-naturalistic view. To a certain extent even in Hegel one discerns this trend of thought. An extremely pernicious upshot of this view is evident in the theory that certain peoples because of their countries' climatic conditions are unsuitable for good forms of governments or condemned to despotism or oligarchy. The modern variants of this theory are found in Nazism, other forms of racism and the so-called white man's burden.

History by its very nature is human. Human beings are architects of history. It is in their societal or aggregative identity that they author history. Negatively speaking, in their isolated identity, i.e., in their separated capacity, history cannot be made possible by them. To put it in another way, history is the product of the interrelated men,—men who understand each other, can communicate with each other, and act accordingly. To understand what history is one is obliged to grasp at least two basic concepts, the concept of relational (human) being and that of action.

Implicit in the concept of action are two other concepts, viz., the concept of understanding and that of communication. Human actions which go into the making of history are distinguishable from caused action, interaction and collision, for example. Ordinarily, the concept of causality is invoked to explain the behaviour and states of *physical* bodies. Ordinarily speaking, physical action, interaction, collision, etc., are explained in terms of causal laws. The refined version of causality includes gravitational pull and push. And this is necessary to explain the so-called steady state of physical bodies. The bodies which appear in steady state are in effect always changing. Closer inspection makes it abundantly clear. Time has a say even in the life of the steady-state physical bodies.

The questions of communication and understanding cannot be meaningfully raised in the sphere of physical bodies. Only in a metaphorical sense can one use these concepts in respect of the behaviour and state of physical bodies. Even the concepts of action and interaction used in physics are almost totally different from those used in history and other human sciences. Such expression as "colliding bodies" might recall an image of war or that of warring groups to our mind. However, that does not bridge the gap between the behaviour of physical bodies and that of human beings engaged in making history possible.

While the above concepts of physics, the paradigm of natural sciences, have little or no relevance to history, there is one fundamental concept which proves systematically ambivalent or, one might say, bivalent in its relevance to both physical *things* and historical *beings*.

This is *time*. Time is there in physics. Time is here in history. Whether physical time and historical time are identical at bottom cannot be determined immediately and unanimously without going into its basic attributes. Physical time is believed to have only one dimension, i.e. succession. Second-

dly, it is irreversible. Besides, some realists maintain that time has its own inner metric.

Each one of these attributes, if taken to be true, raises some problems for the social scientist, in general, and the historian, in particular. To start with, if time is really one-dimensional and if succession is that dimension, then not only the natural scientist but also the historian is theoretically called upon to explain how time is related to other attributes,—length, breadth and width, of space. It is very difficult to conceive time without space. It is a difficulty not shown for the first time by Einstein in his Theory of Relativity. This difficulty has been felt *intuitively* even earlier both by working scientists and common men. This difficulty has been perceived by the social scientist as well. For example, the historian cannot constantly think of history in the analogy of a uni-dimensional time. Every history is found to have both human significance and geographical locus. In other words, history pertains to some people belonging to a place. This sort of belonging is not to be understood in a weak or metaphorical sense. When I say “I belong to India”, obviously I do not merely mean that I live and move on that geographical part of this planet, earth, which is *now* marked or known as India. The physical part of the territory is not primarily the “thing” to which I belong. For, in that case it would be difficult for me and also for others to understand where I *have my being*. *Having being* is certainly more essential to my identity than *living* and *moving* are to it. Even *living*, rightly understood, involves considerable inwardisation of consciousness and is not to be confused with skin-deep behaviourism. Man's life, the substratum of history, is something much more than inhalation, exhalation, eating, physiological movements, etc. All these things, and much else besides, are meaningfully related to more or less consciously entertained purposes. True, everything that man does is not deliberately organised by him. Certain things are habitual with him. Certain other things happen to him. But all these things, taken together, exhibit a meaningful pattern. Even the most habitual parts of our behaviour falling under the concept of *moving* are not entirely aimless. Human movements are, in most cases, oriented towards an end,—customary or consciously entertained. In brief, in the case of man *living, moving* and *having being* are socially oriented. We are part of a relational network which is not entirely our creation. We find ourselves placed in it. But it is true the said network, social structure, is changed, though slowly, by our intention, disposition, and action.

The point I am arguing here is this. Our primary affiliation is social. But to affirm this one need not deny our geographical or territorial affiliation. While I say “I belong to a particular social milieu”, that does not even remotely imply that the said milieu has no geographical locus. But how exactly geographical or territorial identity enters into and modifies our social identity is a very large and complex question. In spite of its largeness and complexity, no social scientist, certainly not the historian, can afford to

ignore it. The importance of the point may be negatively put in this way. There cannot be an absolutely *autonomous* social milieu. Reiterating the same point one can also say: history is never autonomous. In various ways it is geographically embedded. It is no wonder that history and geography are included in the very basic curriculum of children. The pedagogic assumption is significant: one of the first things that the human child is required to learn is that he belongs to a place and is affiliated to a culture and that the concerned place and culture are intimately related.

Conceptual scrutiny and experimental findings reveal that we, human beings, simultaneously belong to at least three worlds, —Physical World (PW), Psychological World (PYW) and Ideational World (IW). PW consists of the physical, chemical and other elements and processes of nature. Our bodily existence is undoubtedly made up of different physical and chemical properties and their various inter-mixed forms. In Indian philosophy, we are often told of the materials which *commonly* belong to the external material world and our, i.e., human, physical existence, viz., *kṛti* (earth), *apah* (water), *tejas* (energy), *marut* (air), *vyoma* (space). The presence of these elements in the physical environment is not ordinarily doubted. But without experimental demonstration one is not usually convinced of their presence in our human body. From this point one must not hastily conclude that there is no difference between the physical environment and the embodied man, between *physical* bodies and *human* bodies.

In this connection, one is only required to look closely into the domain of physics, PW, and its relation to and difference from that of physiology as the basis of PYW. Such borderline disciplines as biophysics and biochemistry are engaged in studying the *causally interactive* relationship between PW and PYW. The fact that mental phenomena are not autonomous, i.e., not based on some particular form of physiological structure, shows that the latter sustains or makes possible the mental structure. Further scrutiny shows that human bodies and physical bodies, though element-wise identical at bottom, are qualitatively different. The difference between human bodies and environmental conditions consisting of the basic elements of nature are obvious. Though the latter nourish the former, the former have in them certain capacities, e.g., the capacity for remarkable adaptation, that for acquisition and retention of sense-received information, that for classification and appropriate employment of the same capacities unknown to the non-human, or even sub-human, bodies. In effect, we are obliged not only to draw a distinction between PW and PYW but also to recognise certain intermediate areas studied by such disciplines as biology and zoology. So the three worlds, —PW, PYW and IW, mentioned earlier are only *typological* in character and do not provide a continuous description of the ontological entities of the world as a whole.

The typological description of the world is basically heuristic. It is not even remotely intended to deny the concrete ingression or causal inter-

penetration of finely graded different ontological entities comprised under PW, PYW and IW. Let me illustrate the point. Without air, water and temperature, i.e., energy of the different degrees, neither we, humans, nor the biosphere to which we belong could be sustained. This is one side of the total picture. The other side consists of the effects that we, human beings, produce directly on the biosphere and indirectly on the physical elements which sustain this biosphere.

A sort of circular causality is obtained and is operative between the said three worlds. This circularity may be progressive or regressive, depending partly on the human initiative (or lack of it) and partly on the modes of the operation of the forces of nature. The causal nexus that binds the three worlds is not only non-vicious but something much more interesting and complex. With the advancement of man's *knowledge* of nature and its laws, macro as well as micro, and its *technological* transformation and application, man gradually assumes a position (in his relation to nature) wherefrom he succeeds not only in reducing his dependence on the forces of nature but also in controlling and using the same to his own advantage. True, in the face of such natural calamities as earthquake and cyclone we are still more or less helpless. But it is undeniable that we are now better informed, thanks to science, of their causes and therefore able to do certain things in order to minimise their destructive effects.

When I speak of this aspect, i.e., use value, of scientific knowledge, I am not defending *instrumentalism*, nor am I denying that it helps us to define our relation with nature in increasingly satisfactory ways. The fact that science enables us to *adapt* ourselves successfully to our environment does not mean that its only value is technological or instrumental. Its prime value, to my mind, is truth value, i.e., its ability to inform us correctly of our environment, both internal and external. True knowledge correctly inform us of what we are and by what we are environed. Information-theoretic formulation of knowledge highlights the role of environment in the formation of human knowledge. Undoubtedly knowledge is more than information. It is also true that man forms knowledge and that it is in, and by, man that formation of knowledge is made possible. But the stuff or materials out of which knowledge is formed by man are made available to him by nature. In spite of human transformation of the information supplied by environment, the intimate relation between the two cannot be denied. More positively speaking, a continuous interaction takes place between man and environment at the level of knowledge.

The human individuals, who are the main architects of history, are primarily shaped by two things—heredity and environment. Neither of these two factors determines us unilaterally and causally. The relation is certainly not mechanical. Since the views of Lamarck and Darwin and their followers on the subject have been extensively discussed by the specialists, I do not propose to go into the well-known details of their concern. What I

like to emphasise is this. In the actual operation of both the principles of heredity and environment there are certain imponderables or indeterminate factors. For example, in the operation of the heredity principle there is an element of drift. Hereditary traits are not uniformly or monotonously transmitted from the parent to the offsprings. Inter-generation freakish changes are not entirely unknown. Drift may be both positive and negative. It is this drift which explains transmutation of the species. However, it is recognised that for preserving the very identity of a particular species, the degree of drift has to be kept arrested within a tolerable limit in either direction, positive and negative. Unarrested drift may lead to total extinction or total transformation of the concerned species.

The "natural" process of transmission and transmutation may be somewhat accelerated or decelerated, i.e., humanly engineered. Advancement in bio-technology has now made it possible for us to change ourselves in a big way. People have been talking of the possible marvels of bio-engineering. In the past we heard of the yogis exhorting humans to follow the paths of yoga for the transformation of their very species--specific identity. Of late the commissars, obviously influenced by the modern big-technologists, are telling us the same thing from another, i.e., scientific, angle. Although sailing in different boats, it seems, yogis and commissars are heading towards the same goal: total transformation of the human species.

Some cautious thinkers, however, are of the view that too much of tampering with the process of nature does not augur well for man. It is said to be true both in the cases of heredity and environment. Those who utter the words of caution may be criticised as conservative in their scientific outlook. But it can hardly be denied that there is an element of truth in their contention. Both in man-environment relationship and in shaping the future of man too much use of "sophisticated technology" based on up-to-date science might prove harmful to man. It is well known that the problems due to large-scale industrialisation and extensive urbanisation have been proving very dangerous, and in some cases, even lethal. Nuclear technology and its accompanying hazards have opened up a new dangerous dimension in this already very critical area.

Warning against the misuse of science and technology in the spheres of biology and ecology seems to be based on a very sound premise. The hitherto discovered causal structure not only of the relation between man and environment but also of that between one generation and another is largely imperfect and leaves room for operation of many imponderables and hidden variables. Given this "limitation" of our knowledge, one must not exceed our brief on how to go about in our dealings with physical nature and human life. One can go further and affirm that exchanges of matter and energy which take place between the living creatures, particularly human beings, and their environment, are so complex and dialectically circular that it is

difficult to predict any state of knowledge where the said "limitation" can be totally done away with.

All these points that I am trying to make out here are purported to indicate two things, namely, (a) human life and history are very intimately related to nature and (b) this relation is of such a sort that it demands of us to understand it very perceptively and to handle it delicately, i.e., without being misled by the "marvels" of science and technology. Man's relation with environment and environment's relation with man are variously mediated; it is not direct but complex. What contributes most to this complexity is the increasingly qualified or conditional behaviour of causal laws at different levels. As soon as we leave behind the realm of physics, the behaviour of causal laws starts becoming somewhat unpredictable. The mode of subjection of the living creatures to causal laws is different from that of the physical bodies. Biosphere exhibits more flexibility than PW. This is not to deny, as stated earlier, that the laws of PW have their application to this sphere. When we come to the level of human life and activities, the presence and operation of causal laws prove even more difficult. The diminishing presence and the diminishing compulsive effect of causal laws might be interpreted as the process of increasing freedom. Relative freedom of PYW and IW *from* the causal compulsion of PW do not lift the former entirely from the effects of natural forces. This point has been referred to earlier in terms of the doubly open and circular (or dialectical) causality.

Freedom *from* nature is not a universally acceptable notion of freedom. There is another and equally respectable notion of freedom which affirms that man's freedom consists in recognising the *necessity* which universally (but in a graded manner) binds all worlds,—PW, PYW and IW. According to this view, man is free *from* nature,—within the boundary conditions of the causal laws. Negatively speaking, this view of freedom discounts the possibility of man's gradual disengagement *from* the realm of causality.

It is not at all surprising that the controversy between naturalism and humanism on the nature and course of history basically centres round "the" notion of freedom. One wonders if there is a unique notion of freedom which would be universally acceptable. Commitment to the naturalist conception of freedom leads some thinkers like Comte to the conclusion that history is a complex extension of natural evolution and human freedom basically rooted in nature. Another anti-naturalist notion of freedom persuades some thinkers like Kant to believe that freedom consists in running away *from* the forces of nature. According to them, true freedom is an ideal which requires us to be disengaged even from social and psychological forces. The third view of freedom may be ascribed to thinkers like Spinoza who maintains that necessity and freedom are two faces of the same reality. Since such different notions of freedom are central to our understanding of history in the context of the controversy between naturalism and humanism, we are required to look into them a little more closely.

Examination of different notions of freedom shows that some notions are ontological and some others epistemological. Our preoccupation with the latter, and relative indifference to the former make it difficult for us to define our attitude to the true nature of history. The ontological notion of freedom states that freedom by itself is an absolute or at least autonomous category. To be free one need not run away *from* nature. If freedom *is*, it is everywhere, *in* nature and beyond nature, (more or less) *in* all worlds, PW, PYW and IW. The pro-naturalist is opposed to this view. According to him, nature is step-motherly in its attitude towards human aspiration to be free; the former is antithetical to, if not negation of, the latter.

The question of reconciling nature's role in history and history's relation with nature has been continuously engaging the attention of the philosopher of history. Broadly speaking, three different theses have been put forward on this highly controversial subject. The first thesis keeps nature *seemingly* apart from history but *secretly* invests nature with a plan alien to its scientifically ascertainable character. For example, when Kant submits that "the history of mankind can be seen...as the realisation of Nature's secret plan to bring forth a perfectly constituted State...in which the capacities of mankind can be fully developed", he takes pains to point out that his Idea For Universal History is not intended "to displace the work of practising empirical historians". This thesis, according to him, "is only a suggestion of what the philosophical mind...well versed in history...can essay from another point of view".¹ This thesis provides a cue to the understanding of the bewildering variety and complexity of the events of world-history. In itself this view is not historical. It is rather meta-historical. If the intimate relation between history and geography is consistently followed, this meta-historical or philosophical thesis is of dubious value. It lifts history above geography and then tries to see a universal pattern in all local histories studied by the "empirical" historian. It is interesting to note that Kant himself criticised Herder's view (to be found in *Ideas for a Philosophy of History of Mankind*) on the subject.

The second thesis, traceable to Herder and developed by Hegel, proposes to rise above the Kantian dualism between nature and history. History is viewed as imbued with, and expressive of, God. Hegel is never tired of affirming that history is the pathway of God's march in the world. By "world" here he means "human world" but he makes simultaneously an artificial effort to relate history to geography. The result is extremely puzzling as is evident from his remarks on the different parts of the world. To him, "Asia is the land of sunrise...and...unbounded expansion". Unhappy with the "extravagance of the Orient" he turns his eyes to "Europe...the land in which the spirit descends into itself and concentrates upon itself".

Bearing the European model of "moderation, rationality and spirituality" in mind, when he turns his eyes to Africa, the continent appears to him "conceptually natural" and "outside the sphere of culture". Africa stands on the

borderline between nature and culture. Hegel is appalled at the "settled existence" and historical progresslessness of China and India. In America, "the world of future", mercifully he sees the beginning of "the process of (historical) growth". However, his perceptions of the South American States are different. Of the Spanish and Portuguese peoples of the South American States, Hegel has nothing very palatable to say. "They do not yet possess the spirit of rationality"². Hegel's highly speculative philosophy of history badly emasculates empirical history. He can easily see *Reason* in Europe, sensuality in Africa, irrationality in South America, hope in North America and stupor in the Orient. This broad brush strokes on the historical globe may appear very bold and imaginative to some. But most of the working historians hardly find the Hegelian method of marrying nature and culture, geography and history, interesting or convincing.

The third thesis of *free history* owes its origin to the *providential shadowy history*. The view that human history is the shadowy presence of God in the human affairs has its two versions,—one may be traced to the dualism of the Platonic-Kantian variety and the other to the monism of the Aristotelian-Hegelian variety. The dualist finds God's presence in history in a rather shadowy form. The monist seems to be more confident in this respect. He sees God's design in every nook and corner of history. Even the history of atheism is a part of God's design or, to use the Hegelian expression, "the Cunning of Reason". Once God is pushed back from the scene of history, i.e., his role is denied or diluted, human ideas and activities appear to be the basic, if not the exclusive, stuff of history.

The thesis of autonomous history has been given a very respectable form by Croce. But Croce could not tear himself completely away from Hegel. He too echoes Hegel's providential historism when he says, "the historical web, which is and is not the work of individuals, constitutes...the work of the universal spirit, of which individuals are manifestations and instruments"³. The expression of simultaneous affirmation and negation, "is and is not", in the quoted sentence, indicates Croce's ambivalence on the issue. On the one hand, he wants to vindicate the freedom of the individual and, on the other, rejects "the abstractness of the atomised individual" and the idea of "un-human humanism". His discovery of "the humanity common to men, indeed to the whole universe...even in its most hidden recesses" is bound to remind one of Herder and Hegel. Croce's view was followed by Collingwood to its logical conclusion when he defends the autonomy of history in stronger and secular terms of "re-enactment theory". According to him, history is the re-enactment of the *past* thought, *rational* thoughts and actions, of human beings of thought.

The autonomous thesis of history is logically obliged to maintain that by thought, and thought alone, the historian is able to rise above the irreversibility of time. The historian's claims of grasping the past thought and action can be sustained only on the assumption that he has direct, i.e., not mediated

by evidence and natural laws, access to the bygone past. "The gulf of time" between himself and the object of his study does not seem to be unbridgable. He finds that the object of his study is "of such a kind that it can revive itself" in his mind and that his own mind is "of such a nature as to offer a home for that revival"⁴. Careful scrutiny of Collingwood's writing makes it very clear that the life and the plausibility of his version of autonomous history consist in the *free* nature of both the historical object and the historian's mind. The two are essentially identical at bottom. Thought recaptures thought. History is nothing but free self-affirmation of thought or reunion of the historian's thought with the historical agent's thought.

The stronger version of the attempted vindication of humanism in history is achieved at a rather high price. It assumes not only that the historian is able to rise above the irreversible course of time but also that history itself is completely independent of physical time. Collateral to this thesis is the view that history is also independent of geography. Providential historiography tries to meet these problems by postulating the hidden unity or pre-established harmony between nature and nurture, between physical time and human history, between physical geography and human geography. To what extent this postulate can be empirically or critically vindicated is a matter of serious dispute between the contending schools of historiographers. The strong defender of the autonomous thesis takes refuge in the affirmation that the historical mode of knowledge is self-validating and is not answerable before the tribunal of scientific experience.

But the pro-naturalist historiographer, who is committed to the view that history is causally intimate to geography, has also a very respectable lineage behind him. From Herodotus and Thucydides to Montesquieu and Michelet one can find the traces of geography-oriented history. In our own days this orientation is particularly evident in diplomatic history and military history. Even in Hegel there is a hidden reference to it; otherwise one finds it difficult to explain his identification of the mediterranean world as the seat of *classical* rationality, the Germanic world that of the *contemporary* rationality and North America that of *future* rationality. Comparably intriguing is the anti-naturalist Toynbee's highly general affirmation that in the past human civilisation, nourished by such religions as Hinduism, Buddhism, Judaism, Christianity and Islam, moved from the east to the west and that in the present and in the age to come it will move from the west to the east⁵. Variations of the same theme are to be found in the writings of such thinkers as Spengler and Sorokin⁶. But the historian who, to my mind, has argued very persuasively the intimate relation between history and geography is Michelet. He states: "Without a geographical basis, the people, the makers of history, seem to be walking on air... The soil, too, must not be looked upon only as the scene of action. Its influence appears in a hundred ways, such as food, climate, etc."⁷.

Except the die-hard naturalist, all those who highlight the intimate rela-

tion between geography and history have in their mind "human geography" when they speak of "geography". To them sociology owes very much to ecology. Rightly understood, man, though produced by nature, is a consumer of nature. Shaped by nature and history, man shapes both nature and history. In this connection, Marx's attempt to reconcile naturalism and humanism deserves our attention.

The *human* significance of Nature only exists for social man, because only in this case in Nature a *bond* with other *men*, the basis of his existence for others and of their existence for him. Only then is Nature the *basis* of his own *human* existence, and a vital part of human reality. The *natural* existence of man has become his *human* existence and Nature itself has become, for him, human. Thus *society* is the accomplished union of man with Nature, a veritable resurrection of Nature, the realised naturalism of man and the realised humanism of Nature.⁸

It is not difficult to detect the Hegelian undertone in these views of Marx, still (1844) a young Hegelian. Denial of God's presence in nature does not make it theoretically impossible for him to ascribe humanism to nature and naturalism to man. In a way my own emphasis on the intimate relation between history and geography, sociology and ecology, is also purported to show the relevance of nature to man and that of man to nature. Man cannot make history out of nothing. This is where man differs from the scriptural God who can create or fashion something out of nothing. Man needs nature as his primary stuff to fashion history out of it. But this task of fashioning is heavy, complex and involves co-operation of other human beings. It is only the social man who is the author of history. In fact, society and history are two aspects of the same human reality. This reality consists of individual human beings related in different and durable groups, small and large. Sedimented history is society. And society, *sub species temporis*, is history⁹.

The basic deficiency of Marx's historiography, otherwise a very serious effort in resolving man-nature dualism in society, seems to consist in his accent on class-contradiction as the main propulsion of history. To say, as he does, "all history is the history of class-struggle" is to miss co-operative aspect of history, co-operation between man and nature and that between different classes. In fact, Marx himself in some of his earlier writings speaks of society as "the accomplished union of man with nature". Though the forms of civil society studied by him in the nineteenth century were politically marked by some or other sort of monarchy engaged in mediating between different, at times, even conflicting, classes, he himself could well visualise other forms of polity and economy which would be free from the said elements of antagonism. In fact, conflict-ridden history is a transitional passage to a *relatively* conflict-free forms of polity and economy. However, this is not to affirm, in a utopian vein, the possibility of anarchic human society com-

pletely free from the so-called evil of conflict. All forms, the process of formation and transformation of nature and society are marked by some sort of dialectical exchange of energy or power.

Amidst all changes, history never loses its human or *subjective* face. Nor does nature deface it either. On the contrary, it provides man the materials for the formation and *objective* duration of historical products¹⁰. The supposed man-nature antithesis in history seems to me false,—an extremely one-sided view. The counter-revolutionary role of science, entailing misconstrual of nature and undervaluation of man, is primarily responsible for this avoidable muddle.

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5. See, for example, Arnold Toynbee, *A Study of History*, New One-Volume Edition (illustrated), Oxford University Press and Thames & Hudson, London, 1972. According to Toynbee, human (i.e. spiritual) factors are as important as, if not more than, geographical or environmental factors in shaping the course of history. (p. 96).
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9. I have argued this point elaborately elsewhere. See, for example, *History, Society and Polity*, Macmillan, New Delhi, 1976 and *Environment Evolution and Values : Studies in Man, Societies and Science*, South Asian Publishers, New Delhi, 1982.
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Freewill Determinism and History

THE VERY long and elusive character of the solution of the problem of freewill and (or, should we say, *versus*) determinism has, to my mind, a very instructive lesson for the philosopher. So far as the economist and the political activist are concerned, the lesson I have in view is not central to their professional understanding and action. The philosopher must address himself to the question why this particular problem is yet to receive a commonly acceptable formulation. In the works on economics, law, particularly constitutional history, and political science we get a pretty clear idea when they say, e.g., "this man is free" or "that man is determined". They can more or less clearly spell out the conditions the presence and/or absence of which makes an individual or people free or determined. Besides, the said empirical sciences can also tell us about the growth or decline of the concerned conditions. The history of the above disciplines records the issue and makes it intelligible to us. In contrast, the history of philosophy is replete with numerous formulations and reformulations of the problems and the endless disputes on their acceptability.

One might say: philosophy is the wrong place for finding a solution to the problem of freewill and determinism. For, generally speaking, philosophers only *think* of the problem, rather a set of problems, and do not *act* according to their thought. Consequently, even within their own mind, they are not sure of the correctness or truth of their thoughtful formulation of the cluster of problems.

A somewhat comforting rejoinder to the issue might be like this. The task of the philosopher, unlike that of the political and economic activist, is not to provide a blueprint of action for removing the determining conditions adversely affecting freedom of the individual and the group. He aims at understanding, clear understanding if possible. Even if the activities undertaken for this understanding are regarded philosophical, that hardly brings the philosopher's approach close to what *practical* people like politicians and industrialists do and their presuppositions about the concerned doings.

In all recorded cultures of the world one notices, broadly speaking, two different approaches to *thought* and *action*, pertaining to the things and beings of the world. At times, these approaches prove divergent; at times, they are found to be convergent; but, often, the picture is mixed, i.e., the said two approaches get intertwined.

In the case of Chinese and Indian cultures one finds that the dominant approach is marked by action or *practice*.¹ Thought, explanation, demonstration and the like are found to be secondary to the chosen mode or modes of practice of life. The discerning student of the European culture can easily point out that a similar approach is found also in the Graeco-Roman societies. But from the history of this culture it is clear that, in it, the formal-mathematical approach has received a very careful attention. For, the names of Pythagoras, Plato and Euclid are closely associated with the rise of this formalistic and demonstrative aspects of the European academic tradition.² From the days of Renaissance, particularly due to Copernicus, Galileo and Descartes, this approach has assumed added importance in theoretical enquiry. Another approach of the European cultural and academic tradition, marked by its emphasis on the practical and axiological aspects of the human life, is ascribed to Aristotle and his followers. While for the Aristotelian, the unity of ontology and axiology is fundamental, the Platonist highlights their distinction, giving rise to a sort of dualism. Corresponding to the said dualism one hears of two types of reason, theoretical reason and practical reason. The former is said to be primarily concerned with knowledge and its proof or justification, and the second with will, action or practice and their understanding.

In the study of the objects of nature the scientist has a definite advantage to his credit. He tries to explain it in formalised language which makes no distinction between the intuitions of first person, second person and third person. In a way the scientific account of the world aims to be objective and impersonal. Whether this aim is actually realisable or not is a complex and controversial question. The Galilean-Cartesian tradition is admittedly proof-oriented. However, the question remains whether this orientation is confined only to the context of justification or it includes also that of origination or discovery.

Whether man is free or determined in his action is indeed a very complex question. The first difficulty is with the very meanings of *freedom* and *determination*. Freedom has been construed in various ways, viz. (i) as absence of constraint, inner or outer or both; (ii) as release from ties or bonds or duties; (iii) as personal rights and social and political liberties; (iv) as freedom of action; (v) as something universal—that is, whatever meaning we attach to freedom, one indispensable characteristic of freedom³ is that it should be open or available to all irrespective of their difference in respect of class, sex, education, etc., and (vi) as spontaneous or self-initiated, not fixed. The different meanings of determination may be gathered from the negative correlates of the above-mentioned meanings of freedom. But that leaves some meanings of the term uncovered. It means, among other things, (i) limitation (by some other thing or being), (ii) the quality of being fixed (by rules or regulations, dictation, etc.), (iii) (in the case of actions) being initiated at other's instance, or (iv) performed in imitation of others, or (v) deter-

mined by borrowed motives, beliefs, values, etc., and lastly, (vi) determination implies lack of creativity, initiative, enterprise, etc.³

Analyses of the above meanings of *freedom* and *determinism* do not give us a neat or clear picture of what these terms really convey. Perhaps, it would be safe to say that they do not convey the same sense in all contexts. And that is a pressing consideration why each of the noted senses needs to be placed in a particular context, linguistic or otherwise, in which it figures.

The concepts of freedom and determination are intimately related to the concept of human action.⁴ Man can perform action in two different ways, behaviourally or externally, dispositionally or internally. Physical fitness or ability is an obvious pre-requisite for performing what is called external type of actions. Such terms as attitude, will, motive, want, intention and disposition do not exhibit any obvious behavioural or external correlate. Even then I as first person know what the concepts underlying these terms are. My internal mental phenomena, even in the absence of their communicability or expression to others, are compellingly, i.e. undeniably, present in me. It may be true that the concepts I use for identifying these phenomena within me are also available outside me and to be used by others in a more or less same way. But this common sharability or employability of the concepts do not take away the subjectivity or the first-person privileged access of one to one's own internal conscious phenomena captured in terms of these concepts. The exaggerated fear of subjectivism or psychologism has led, in the recent past, a large number of philosophers to a view that "internal phenomena" are due to their conceptualisability or representability in some or other externally available and communicable media.⁵ The philosophers of the analytic tradition, largely influenced by the method of scientific proof and justification, have defended and argued for this generic view and its different formulations.

It is true that the main enabling condition of action is body and in an obvious sense it is a part of the physical world. Like the physical body, our bodies also occupy spatio-temporal segments and are open to the physical forces like temperature and motion. The attempt to get to our internal phenomena through the available physical cues is destined, beyond a point, to fail. What I, as first person, can know of my motives and intentions is not available to you, he or they. Our doubt about what happens to other persons is rooted in this experiential asymmetry.

Uncritically committed to scientific methods and proofs, some philosophers felt that even the proclaimed privileged access of the first person to his own internal "happenings" and "doings" is a doubtful proposition. For, it has been argued, these "happenings" and "doings" can hardly be presented and proved in the way scientific objects can be. It is clear from this line of argument that this pro-naturalistic approach to internal phenomena is due to a persistent refusal to recognise the intuitive distinction between *what one does*

and *what happens to one*. The so-called elusiveness of mind and mental phenomenon is due to this misplaced scientism.

The body may prove very useful in understanding the meaning of freedom provided we try to grasp its (what may be called) *situated* character. Everybody is in a way aware of the situation in which it is placed. It has an orientation to its place, whether the place is inhabited by certain people or not. In a mode of speech one might say: body, even while left to itself, has a self-orientation. It succeeds in drawing a "cut-off" line within itself. It has a capacity to be reflective, making itself a content of its consciousness. To understand this peculiar human phenomenon the concepts of action and time are extremely important.⁶

Body can know itself because it is *aware* of what lies beyond it. It also needs time or change to be aware of what it is. Its past and future contribute to its unique situation and orientation at a particular point of time. By using a *reductio* argument it can be shown that a body which is not subject to any change, i.e., is not capable of being aware of its past and future, is dead and incapable of acting. Freedom of action means freedom of movement. It is available only in the world at each stage of its history.⁷ History has no life of its own. Such expressions as "history is freedom-seeking" are to be taken as metaphorical. As against the methodological holist, the methodological individualist⁸ interprets historical phenomena in terms of individuals, their intentions, actions, and societal presuppositions. Interestingly enough, Marx who is sociologically a holist, maintains clearly the view that the basic authors of history are individuals,—social individuals,—social by virtue of their action or labour.

Both Marx and Wright try to explicate the concept of freedom in the context of the situatedness of man in the world—social world. The social world consists of individuals acting and reacting in a relatively stable network of inter-individual relationships. Though this social network is there to make human actions meaningful, communicative and effective, it is itself subject to historical change. This change is effected or brought about by human agents. Individuals and history, ontologically speaking, are interlocked in a *dialectical* relation. Sociologically speaking, they are engaged in an open-ended *dialogue*. Ontology sustains sociology. The latter manifests or at least partially articulates the former. When it is said that history is not pre-determined or is not moving to a pre-fixed goal,—in the fixation of which historical agents, i.e. human beings, have no say—we are reviewing history essentially as a human phenomenon,—an endlessly unfolding phenomenon. This phenomenon, unlike its physical substructure, is not quite subject to the laws of nature. The hidden nomic character of nature might contribute to our empirical understanding of history but it is not that which makes history and its meaningfulness possible.

When Von Wright defines freedom in terms of alternative choices, he seems to be quite aware of both the causal laws of nature and the non-

subjection of human action to the operation of those laws. In a way, I am inclined to say that individuals are simultaneously consumers and producers of history. According to Wright, "the concept of causation presupposes the concept of freedom". For, he argues, "it is only through the idea of doing things that we come to grasp the ideas of cause and effect..."⁹ Evidently, the concept of freedom, to his mind, is available to us through action. However, he is careful to point out that the way of our grasping the concept has nothing to do with the objective and predictable operation of the causal laws of nature. Human situation seems to stand in a two-way relation to the world. When we speak of the world in human context, we have its two levels in view,—physical and historical. The physical world, as mentioned earlier, has, though indirectly, something to do with how human beings can or cannot shape their history or destiny. The alternative courses of action open to an individual or a group in a given situation and at a particular time are bound to prove finite or limited in effect. This finitude or limitation is hardly explainable unless we presuppose that there are some constraints due to the hidden or not-so-hidden causal laws. For example, the very state of our psychosomatic activity or passivity is subject to certain causal forces. The limitation of our choices may also be ascribed to a pre-determined goal of history lying ahead of the historical agents and towards which the latter are being drawn irresistibly or inevitably. When philosophers like Spinoza and Hegel speak of immanent causality—immanent in human beings—they try to reconcile the concept of freedom with the concept of causation. Self-causation is regarded by them as freedom. But this self-causation cannot be violative of the laws of history laid down by the Divine working from within the process of history and without being exhibited in it.

The most interesting feature of the problem of free will and determinism could, perhaps, be formulated in the following words. If the concept of freedom is taken as an explanatory postulate and is not made accountable to human experience, it turns out to be metaphysical in the bad sense of the term. In that case, one can speak of freedom as a purely ontological or metaphysical concept which has nothing to do with its availability in human experience. This has led some philosophers like Hume and Kant to *postulate* freedom without paying sufficient attention to how it is *theoretically* and cognitively related to human situation. They have instead concentrated on the *practical* bearing of this concept on human action. Wright is right when he affirms that determinism may be rooted both in empirical causation and rational purposiveness. If we are causally pushed from behind by history or teleologically pulled by some or other purpose or goal not chosen by ourselves as human beings, it is not clear how we can credit ourselves with genuine freedom. Both causalism and teleology in their robust forms give the impression that human freedom is an illusion or is based on our ignorance, at least partially, of what is *really* happening within and around us.¹⁰

But it seems that the problem of freedom cannot be understood, still less

effectively tackled, unless it is viewed within what Wright calls "closed systems". It is only within the "closed systems" that we can possibly determine or ascertain empirically to what extent we are able to initiate certain moves or perform certain actions, and to what extent we are prevented from doing so by forces alien to ourselves. When metaphysically minded philosophers start speaking in terms of "absolute mind" or "transcendental freedom" in a seamless world, i.e. "open systems", I do not see how we can possibly think of our *situation* within it. If neither boundary nor initial conditions of a system or world are available, I do not know how to characterise our position in it. In this sort of cases one is, perhaps, justified in saying that *human freedom* is "empirically real but transcendentially ideal."

But to say this is not to castigate outright the significance of this "transcendental ideal". Though not a part of discourse of science, it can well form a part of what is called by Wright as "aesthetic humanism". The visions of history of a Hegel or a Spengler may not be scientifically testable but, according to one interpretation, their elevating influence and, according to another interpretation, their anti-libertarian implications can hardly be denied. Some forms of immanent causalism and transcendental teleology lead to a sort of what Popper and Berlin will term as "historical inevitability" and "moral positivism". A similar perception is evident in Wright's understanding of history. "An interpretation in terms of immanent or transcendental aims can make us acquiesce in the things as they happen, thinking that they serve a purpose unknown to us. Or it can reach us to action for ends purported to be set, not by the contingent wills of the individual agents, but by the very nature of things or by the will of God."¹¹

True, aims of history, paradigmatically speaking, are of those human agents who shape history and not of "anything beyond or behind", - not even of history itself, unless, of course, one speaks of it metaphorically. History being closer to art than to science, I find nothing particularly wrong in the presence of analogies and metaphors in historical narratives. We must remember that history, unlike science, has no vocabulary of its own and is written in ordinary language and, therefore, as we know, it must have in it the necessary figures of speech. Besides, the value-laden character of ordinary language is also bound to be there in history. Philosophically speaking, the reason for the artistic and the value-laden characters of history lies basically in its human base. The human agents who form the basement, act more or less freely, choosing their individual aims and *socially* available and appropriate means. While these choices do not ordinarily come in clash with the hidden nomicness of Nature, often these depart from the accepted "laws" and "trends" of the time and traditional norms. Some historians like Fisher and Geyl see history as a sequence of *contingent* events; others like Carr, Spengler and Plekhanov have challenged this view from different standpoints. Largely influenced by Burckhardt's classic work on Renaissance, Wright opts for a middle course. He sees both recurrent patterns and

unpredictable chance elements in history.¹² Chances are rooted in human choices,—right, wrong, and erratic, and patterns in the societal affiliation of human beings. Chances and choices lend *individuality* to “morphological similarities” of different historical epochs. Traced back to their sub-structural depth, these similarities are at least partially grounded in the laws of-nature,—geographical position, climatic conditions, etc. This basement of historical explanation is not really historical: but even then one has to recognise it. For, non-recognition of this aspect might lead one to believe that human history has *nothing* to do with natural history.

The basic stuff of history consists of human actions as influenced, often unconsciously, by social norms and regularities. Because of their “triviality”, i.e., well-known character, these norms and regularities are not ordinarily *mentioned* in the narrative texture of historical explanation. Against the Covering Law Model (CLM) of Popper and Hempel this anti-subsumptive form of explanation has been defended in different ways by Collingwood¹³ Oakeshott,¹⁴ Dray,¹⁵ Winch¹⁶ and Anscombe.¹⁷ Evidently, Wright is sympathetic to the latter form of explanation which is often known as Continuous Series Model (CSM). But he, like Anscombe, tries to bring out the *practical syllogistic* structure of explanation. The major premise of the syllogism states some end of action of the historical agent(s); the minor one mentions some *course* of action or means (socially) leading towards that end; and the conclusion relates the use of the means to realise the “chosen” end. Strictly speaking, as both Anscombe and Wright recognise, the structure of practical syllogism is loose, inarticulate and lacks in *probative* effect of theoretical reasoning.

By bringing out the implications of practical syllogism, Wright claims to have provided the sciences of man a “long missing” methodological need, “a definite alternative to the subsumption-theoretic covering law model”.¹⁸ He has been influenced both by the hermeneutic or interpretative approach of Charles Taylor and the later Wittgensteinian “meaning” approach of Peter Winch. Both approaches are continental in their inspiration and mark a departure from CLM. While Taylor favours first-person understanding of social phenomena and tries to work out its “logic” for general acceptance, Winch, like his mentor, is primarily concerned with the *rules* followed by the agent in making his actions meaningful to all alike. The former’s emphasis is on self-interpretation and the latter’s on self-interpretation-as-understandable-by-others. The other-orientation of the explanation of action obliges one to seek and formulate *criteria* of meaningfulness of action. The self-orientation of self-interpretation, repeated and closely related self-interpretation, discloses and clearly presets first-person meaning to and for *all* persons. Understandably, Wright’s sympathy lies with Taylor and not with Winch who is over-committed to “criteria”. Wright’s “practical” approach to historical explanation, in spite of its hermeneutic tilt, is not explicitly opposed to causalism.¹⁹

The practical affairs involving a large number of persons with which historians are generally concerned can well be regarded as causal. Wright's treatment of the issue is particularly interesting because, unlike many other philosophers', e.g., Davidson's, his approach shows awareness of how professional historians deal with this problem. While Davidson focuses his attention on philosophical psychology, cause of action of this or that *particular* person, Wright shows how historical causes operate on a broad canvas involving *many* beings and social and political institutions. The difference between the two approaches may be shown from another standpoint as well. While the physicalist is anxious to show *why* the first-person cases of "cause", rightly formulated, are extendable to the second-person and third-person cases, the pro-hermeneutic thinker wants to show that there is something really *individual* in every human event, small and big,—i.e. the factor of "subjectivity", which is rather obvious in the first-person cases. In order to make causal explanation of human sciences objective and impartial, i.e. scientific, the "subjective" side of causation should not be overlooked. In hard sciences, like physics and chemistry, explanation is constructed relying mainly on universal laws or hypotheses and recognising the contribution made by initial conditions or attending circumstances of the explanandum, event or action. The flat version of Covering Law Model (CLM) can hardly take note of such "unreasons" as pride and prejudice, hatred and infatuation, which are there in all human minds, including those of the historical agents. Because of this well-known fact about human nature the "rationalist" variety of causal explanation is not quite to the taste of Wright. He is not opposed to causalism as such. He points out that causal explanation need not be construed necessarily in the form of CLM. Many of the historical explanations we come across are *quasi-causal*. In the structure of quasi-causal explanation one can easily discern two sorts of things,—"subjective" reasons entertained by historical agents and *straightforward* causal thrust emanating mainly from institutional sources. Often in the actual historical situation these two factors get mixed up. Neither institutions operate along the predictable causal lines nor "subjective" reasons can break or subvert totally the causal thrust-lines of human institutions. In fact, the public character of social institutions substantially removes the subjectivity of "subjective" reasons and makes the latter intelligible inter-subjectively,—at times even inter-culturally.

The validity of both quasi-causal and quasi-teleological sorts of explanation is independent of any nomic connection. Neither transcendent nor immanent *telos* can completely determine human action, individual or collective. Positively speaking, human beings, in spite of their subjection to social influences and bio-physical forces, are considerably free to choose their goals and, therefore, responsible for the outcome of the choice(s). For understandable reasons Wright is unwilling to draw a hard and fast line of demarcation between (a) causal and quasi-teleological explanation, on the one hand, and (b) teleological and quasi-causal explanations, on the other. Neither sort is

sui generis. The endless interplay of both teleological and causal factors is evident from all spheres of history. Wright, like Burckhardt, sees history as a work of art, partly compulsive, partly imitative and partly creative. He "insist(s)" upon the *sui generis* character of action-explanation in conformity with the patterns of practical inference and contrast(s) it with the explanations which rely on law-like connections".²⁰ The practical component is partly imitative and partly creative,—always an end-seeking enterprise. Though action-explanation, which constitutes the core of historical explanation, does not as such rely on law-like connections, the latter forms the basement on which the intelligibility or rationality of the former largely rests. Because of our close cultural familiarity with the basement components of the structure, we hardly mention the same explicitly. But to deny their existence altogether raises a problem for a philosopher. For a historian it may not be a problem. Because he is not called upon to exhibit the relation of his explanatory account of an event or action with what happens elsewhere in the world. But, generally speaking, the philosopher *qua* philosopher looks round the professional area of his work and tries to see the things, both visible and invisible, in understandable relations.

Three great German historians of the last century,—Ranke,²¹ Burckhardt²² and Droysen²³ who brought about a "revolution" in historiography highlighted three different but related aspects of history. Ranke's main interest was to ascertain, on the basis of "original sources", what "actually happened" in the past; Burckhardt's to "see" the creative and aesthetic character of history; and Droysen's to "show" the validating relation between "life" and history. I do not know the extent of Wright's familiarity with the works of Ranke and Droysen. But it is clear that his reflection on history is close to Burckhardt's and Droysen's. Ranke's historical positivism is unlikely to be endorsed by Wright.

Man has been occupying the focus of Wright's attention right from his young age. His studies in history fostered in him what he calls "aesthetic humanism". There was perhaps an accent on *individual* man which he felt later on somewhat underrates the importance of the social aspect of the life of the individual. This larger view of life is always evident in his thought. Personally speaking, his historical consciousness and the breadth of his social consciousness are praiseworthy not only because of their humanitarian aspect but also because of their *deeper* professional implications. It is more pleasant than surprising to note that some of his academic activities were born out of "a feeling of the discrepancy between the narrowly restricted relevance and scope of [his] professional work and the drive which [he] always felt to make philosophy relevant to [his] life and [his] understanding of the world".²⁴ When a philosopher feels obliged to see his professional work in relation to the society and the world he lives in and tries to explicate this relation, he is doing his professional work seriously and comprehensively. In other words, the dichotomy between "theoretical reason" and "practical

reason" is more fancied than real or genuinely lived. Wright brings out this very important point in his different works. This becomes clear when his works are viewed in sequence and reviewed as a whole.

The transition of his philosophy of life from the phase of *aesthetic humanism* to that of *rationalist humanism* shows his broader perception of the world-history and deeper sympathies to the human-kind. I feel deeply moved when I read his words: "What made me reflect on the human condition in the light of the societal forces and institutions can be condensed in one word: "Vietnam." His *Intellectual Autobiography* is not purely an intellectual enterprise. It is a more serious engagement. It is a critical, often self-critical, exercise in out-living one's own creative past in quest for a more creative future. His concern with action, change and tense-logic is deeply interwoven with his own critical and creative approach to his own life. It is interesting to note that he reviews time and again this life in a newly emerging social and global context. The creative impulse underlying his serious professional works takes him beyond the phase of rationalist humanism and the new phase he arrives at is termed by him as *social humanism*.

I have deliberately referred rather extensively to his own intellectual autobiography to make out the point that the life-history of a creative thinker is remarkably similar in many respects to that of a society or culture. I have said earlier that our life exhibits both in decay and growth three types of forces,—compulsive, imitative and creative. Because of our bio-physical basis of existence we belong to the natural forces of the world. Our societal affiliation obliges us to conform to certain customs, habits and manners. But nothing ties us *deadly* down to the earth. We can disengage ourselves from the forces of nature by virtue of our knowledge of the same and the technology based thereupon. Our reasons and reflective power enable us to free ourselves, at least partly, from the social milieu and the historical time we belong to. The most remarkable gift of man is to set before him certain norms which mark departure from the existing ones. This shows simultaneously two things. He can be *critical* of what is given or available to him. Besides, he can create what is not there before him. This creativity shows his awareness of and ability to exceed the "causal" forces under which he is placed. This ability gets reinforced when he undergoes an inner transformation which relates him almost directly to the external conditions of his life and, at the same time, instil in him an urge to change these conditions for betterment not only of his own individual life but also the life of others with whom he lives.

This practical way of living life is not strictly systematic. Its style or method is more artistic and historical than systematic and well-defined. True, in philosophy one tries to articulate and systematise his inner conceptual intuitions. But those intuitions do not lend themselves to complete systematisation. Elements of fiction, so to say, are to be used to capture them all together into a meaningful whole. The fiction-inventive capacity of the human mind is basically artistic and creative. Within ourselves we feel both the inertia

and determinism due to our physical moorings and social roots and the liberating and enabling power of the said moorings and roots. One might say: what binds us down to the earth and society also enables us to rise above and create the same anew. Fact/fiction or nature/culture dualism, hermeneutically understood, is indeed untenable. Born in the same world, situated in the same society, we live differently, want to shape the future and re-create the past differently. In fact, we are born free, but being not mindful of what we really are we often complain that we are determined. Pleased to formulate our situation, we often fail to do so. We fail not because of some inherent imperfection of our mind. We fail mainly because of the very nature of our mind. It never returns to its contents or even to itself in an exactly identical way. When Wright, for example, feels that he is an "aesthetic humanist", and thereafter thinks that he is a "rationalist humanist", and, later on, presents himself as a "social humanist", he, *practically* speaking, is interpreting and re-interpreting the text of his own life. To what extent that life is "intellectual" and to what extent it has been shaped by other equally important considerations can hardly be demarcated sharply or measured correctly.

When Wright writes in a confessional vein "I now know that I can learn something from Hegel and even more from Marx"²⁵, he is articulating new meanings of his life. Every new meaning of a life, individual or collective, is a new form of alienation, departure from its existing form, and by articulating it, one seeks to enjoy freedom,—creative freedom. In his quest for new meanings of life, new forms of freedom, the philosopher, like other social beings, cannot afford to leave the things "as they are"; he has to change them. And the change is to be brought about by interpretation and re-interpretation, action and interaction, by endless practices.

NOTES AND REFERENCES

1. N.K. Devaraja thinks that "...the law of *karma* was but a detailed version of the Vedic concept of *ṛta* in its application to the moral life of... human creatures" (p. 19) and that "the Hindu moral teachers lay... special emphasis on *svadharma*, i.e. the duties or way of life that is binding on a person as a member of a particular caste or group." (p. 30), *Hinduism And The Modern Age*, 1975, Bombay, Current Book House. Hindu Culture is not necessarily to be equated or identified with Indian Culture.

Joseph Needham draws our attention to the Aristotelian distinction between positive law as *diakaion nomikon* and natural law as *diakon physikon*. The latter is said to be quantitative and ethically indifferent to contextual variation of human disputes. "...in the Chinese context there could hardly be a *jus gentium*, for owing to the 'isolation' of Chinese civilisation there were no other *gentes* from whose practices an actual universal law of nations could be deduced, but there was certainly a natural law, namely, that body of customs which the sage-kings and the people had always accepted, i.e. what the Confucious called *li*." (*Science and Civilisation In China*, Vol. II, 1975. Cambridge, Cambridge University Press, pp. 520-21 ff).

2. "Closely connected with the rise of the concept of a generalized, theoretical and abstract science and closely connected also with the rising critical spirit among the pre-

Socratic philosophers...was the evolution among the Greeks of a strict methodology of reason...logic...mathematics...fundamental instrument of science," Marshall Claggett, 1979, *Greek Science in Antiquity*, New York, Collier Books, p. 37.

3. D.P. Chattopadhyaya, *Individuals and Worlds : Essay in Anthropological Rationalism*, 1976, New Delhi, Oxford University Press, pp. 8-12.

4. *ibid.* pp. 183-93, 205 ff.

5. Quine, for example, treats "body" under the head of Physical Objects. "What may primarily be said in characterisation of physicalism...is that it declares no unbridgable differences in kind between the mental and the physical". (W.V.O. Quine, *Word and Object*, 1975, Camb, Mass, : MIT Press. p. 265); in a similar vein Smart observes, "Man is part of nature, a very wonderful part of nature perhaps, but not necessarily pre-eminent in any way." (J.J.C. Smart, 1966, *Philosophy and Scientific Realism*, London : Routledge and Kegan Paul, p. 151); a somewhat diluted version of physicalism, anomalous monism or holism, is found in the works of Donald Davidson. (*Actions and Events*, 1980, Oxford, Oxford University Press, pp. 216-18; see also, *Truth and Interpretation*, 1984, Oxford, Clarendon Press, pp. 155-58, 220-22, 231-33).

6. The ontology of bodily freedom has been very persuasively argued, for example, by M. Merleau-Ponty. See his *Phenomenology of Perception*, tr. Colin Smith, 1970, London, Routledge & Kegan Paul, pp. 174-99. He criticises the physicalist approach "to jettison the subject" and the subjectivity of the body.

7. G.H. von Wright, 1971, *Explanation and Understanding*, Ithaca, Cornell University Press, p. 48.

8. D.P. Chattopadhyaya, 1973, *Individuals and Societies, A Methodological Enquiry*, Calcutta, Scientific Book Agency, 2nd edn. Ch. I.

9. *ibid.* pp. 81-82.

10. I have discussed my understanding of the problem of values and freedom elsewhere, particularly with reference to natural and biological facts. (D.P. Chattopadhyaya, 1982 *Environment, Evolution and Values : Studies in Man, Society And Science*, New Delhi, South Asian Publishers, Part V : Epilogue).

11. G.H. von Wright, *op. cit.*, pp. 166-67.

12. ———, 1973, *An Intellectual Autobiography*, pp. 9-10.

13. R.G. Collingwood, 1970, *The Idea of History*, London, Oxford University Press. See particularly Part V, Sections 2, 4 and 6.

14. M. Oakeshott, 1933, *Experience and Its Modes*, Cambridge, Cambridge University Press. Oakeshott rejects causal explanation in history. According to him, "causes... although ...are not altogether absent from the writings of historians, are nevertheless not consonant with the character of historical events and are consequently unable to provide an explanation satisfactory in historical experience", p. 126.

15. Dray refuses to recognise the necessity of laws in historical explanation. William Dray, 1957, *Laws and Explanation in History*, London, Oxford University Press. See particularly Ch. VI, Sections 2 and 3.

16. Peter Winch, 1958, *The Idea of A Social Science*, London.

17. G.E. Anscombe, *Intention*, 1957, Oxford, Basil Blackwell.

18. G.H. von Wright, 1971, p. 27.

19. ———, 1971, pp. 135-45.

20. ———, 1973, *An Intellectual Autobiography*, p. 66.

21. Leopold von Ranke's (1795-1886) concern with what actually happened in the past, notwithstanding its pedestrian presentation, is essentially anti-Hegelian in its philosophical inspiration. History, to his mind, is not expression of Reason or Thought. He finds no Providential Plan, general laws or patterns in history but, he admits, its richness and variety are likely to make one believe in some such "thing(s)". His main works—*History of the Latin and Teutonic Nations* (1494-1514), *History of the Reformation in Germany*, and *The History of the Popes*—exhibit, besides amazing scholarship, his positivist historicism.

22. Jacob Burckhardt (1818-1897) is in many respects both anti-Hegelian and anti-Rankean. He rejects Ranke's archival or "dead" approach to history. "Individuality" and "pluraity" of culture underlie the changing *life* of history. Equally opposed is he to Hegelian predestinarianism. Fascinated by the beauty and diversity of art, history and antiquity, he delved deep into the details of the concerned areas of study and found, to his delight, that different cultures and periods of history are marked by "analogies" and not vitiated by "anomalies". Following Vico he takes language, poetry and myth very seriously in order to get into the heart of past and distant cultures. Burckhardt's basic works—*The Age of Constantine the Great*, *The Civilization of the Renaissance in Italy*, and *Force and Freedom: Reflections on History*—bear the imprints of his visions of culture, occasional romantic flight from the modern age, and a systematic interpretative cast of mind.

23. Johann Gustav Droysen (1808-1884), like Herder and Hegel, believed that Prussia was destined to bring about German unification. History, to him, is an expression of large national *life* and has always a message in it to be deciphered by the perceptive and creative mind. Wilhelm Dilthey's (1933-1911) "Philosophy of life" and "critique of historical understanding" owe a lot to Droysen's works and ideas.

24. G.H. von Wright, 1973, p. 27.

25. *ibid*, p. 33

Freedom Interpretation and Meaning in Human Sciences

I

PREFATORY. The nature of human sciences is bound to be intimately related to human nature. The subject matter of human sciences, broadly speaking, consists of human actions, dispositions and their societal affiliation. Given their affiliation, different human beings, even the same human being at different times, have different inclinations and can act differently. *Freedom* of action and disposition is a key concept of all human sciences. Situated identically, "identically" from an external point of view, humans *interpret* their relations with the "situation" in question in different ways.¹ Since the human situation largely consists of human beings themselves, the diversity of man-situation relationship is to be understood also as an expression of the diversity of the inter-human relationship. The ability of one and the same man to view and review his relationship with other human beings in widely different ways is evident from the changing texture of the inter-human relationship. For example, the same partners in life, who at one stage love each other, may develop deep hatred and get finally separated. Comparable change of relation between ideologically identically committed nations is not unknown either.

What these changing phenomena bring to the focus of our attention is freedom of action and disposition. Phenomenological reflection on the nature of human relationship brings to our notice another very important concept; and that is *meaning*. I may take a man for a friend when he shows a particular disposition of mind, and for a foe when he shows a different disposition.

In other words, all things being equal, one is more or less free to interpret the meaning of others' actions and dispositions. Underlying these changing interpretations and meanings of human actions and dispositions is what they constitute, a form of life, and which in turn is sustained and moulded essentially by human freedom. *Lebensform* and what makes it possible constitute a growing, i.e., non-vicious, circle.

In what follows I propose to try to clarify phenomenologically the ontology of human nature and its bearing on human sciences to be understood basically in terms of *interpretation* and *meaning*.

II

Freedom. That man is free is rarely disputed. But philosophers and social scientists are not unanimous in their construal of freedom. It has been differently construed, viz., (a) as absence of constraint, (b) as recognition of necessity, (c) as spontaneity, and (d) as consciousness. Each one of these views is open to more than one interpretation. In fact it has been differently interpreted. This is evident from the history of eastern and western philosophies of social thought.

Freedom as absence of external constraint, to start with, appears an ambiguous concept. But when we reflect on it, its meaning starts becoming clearer to us.

The distinction drawn, often naturalistically, between "the external" and "the internal" turns out, on scrutiny, to be untenable. A devotee may be more determined or influenced by the presence of an idol or image of a deity than by the living presence of another person or the priest of that deity. To him, the presence of the stone-deity may prove more influential than that of all biologically living human beings. In contrast, it may be pointed out, an imprisoned freedom fighter in iron fetters may continue to feel the spirit of freedom in him. To him, the presence or the absence of external constraints may not be a sufficient condition for giving or taking away human freedom. We know of many persons who are rootlessly or unduly afraid of "things" not even known to them. The neurotic patient's feeling of persecution is said to be rootless. Curiously enough, even free situations at times put a sense of bondage in us. Freedom is like a double-edged knife. It may cut our bond; it may also cut in our freedom.

The pre-reflective view that body curbs our freedom has to be perceptively understood. There is a duality in the role of the human body. In a sense, my body curbs my freedom. The physical inertia of the body, its spatial situatedness, its passions, needs etc. somehow tie me down to a limited area. To a certain extent, the motion of my body is restricted by its weight and orientation. Viewed thus, the body is an impediment to my freedom.

Implicit in this assertion is the assumption that I have an existence which is non-somatic and non-hedonic and there lies the true seat of my freedom. In other words, the suggestion is: I, as a thing-being (*Jada puruṣa*) or somatic-being (*śārīra puruṣa*), am not free and that I, only as a mental being (*manomaya puruṣa*) am free. The philosophers of the dualist or gradualist persuasion often use this argument as a plank of anti-physicalism and anti-hedonism. Both in the *Sāṃkhya* and in Kant one can easily discern this trend of thought. One socio-ethical corollary of this view is berating the significance of the body in the context of freedom. In "Two Negations" of *The Life Divine* Sri Aurobindo shows the fallacy of this view.²

The defenders of the anti-somatic approach to freedom fail to see the sense in which the body is a positive condition, not impediment or constraint,

of freedom. Even if it is assumed that I have a mental plane of existence, that does not mean that my other plane, the somatic one, is antithetical to it. On the contrary, the body is phenomenologically found to be articulative of my "inner" freedom. It is in and through my body that I articulate, execute and exercise my freedom. So do other humans as well. Words of our mouth, movements of our body and other uses of our physical existence bring us in *communion* with each other. To put it otherwise, in order to be aware of our membership of, our belonging to, a community, each of us needs a body. To dramatise this point one might say: only these embodied beings can form a *community*. Physical things or bodies, which know no freedom, cannot form community. The reason that we, humans, can form it is indicative of the fact that our bodies are expressive and *communicative*, and not physical in the sense of a "dead" thing. Our body-being, even while it performs a *separative* role, does not cease to be communicative.

The double-edgeness or the duality of human freedom may be clarified in another way. My body, without ceasing to be mine, is both subjective and objective. It has a *subjectivity* of its own which is not experientially available to others, unless, of course, we try to explain the concept of experience itself in the language-game-theoretic model of Wittgenstein³ or in the behavioural model of Skinner⁴. When we speak of the subjectivity of the body, we do not even remotely deny the objective availability of it, of what it expresses, articulates, exercises and performs⁵. In this sense, the body has admittedly an *objective aspect*. Our actions, linguistic as well as (non-linguistic) behavioural, are intelligible to others because what we do or what the body does is phenomenologically public, i.e., available both to ourselves and to others.

Extending this line of this argument, it can be shown that once we understand the meaning of somatic freedom it can serve as a seemingly meagre input of social action and communication. If our social life gradually turns to be larger and larger, the latter, i.e., the enlarged output, can be shown to be an expansion of the "meagre" input⁶. The basic ontology of the social forms of life, smaller and larger, is same. Whether we try to understand the structure and function of family, clan, tribe, etc., on the one hand, or those of nation, confederation of nations, empire, etc., on the other, the basic ontology is provided by embodied human freedom.⁷

III

From Freedom. When we emphasise the embodied aspect of human freedom, we try to show two things which are already there. One: the concrete and public character of human freedom. Two: to discount the disembodied or "spiritual" ontology of the social forms of our life studied by different human sciences. When we speak of discounting the spiritual ontology of human sciences we do not mean to deny altogether the theoretical

aspects of the same. The whole of our social life cannot be translated into observational language. Neither observation itself nor its largest possible outcomes are observationally available. It is only in and through phenomenological reflection on the nature of human freedom and what is disclosed by it, the smaller forms of life, that we can gradually get into the larger forms of life, their hidden recesses and complexity. What we call societal facts, e.g. "national policy climate", "international currency market", "global peace", though understandable, are not experientially available. One outcome of human freedom is to get always beyond the given. Phenomenology shows us how to *understand* the not-given in terms of cues provided by the given and without any inductive leap and, therefore, without demanding of us any justification of this method. Phenomenology of social sciences shows how, as a method, it takes us forward to the understanding of increasingly complex social phenomena.

The passage from the "simple" given to the "complex" not-given, from the "specious" present to the "obscure" past or future, proves problematic not only to the sceptics of the Buddhist or the Humean type but to all human beings. It has been understood in very many ways, viz., in terms of (i) laws or regularities, (ii) rational reconstruction, in which (i) is implicit, (iii) continuous narration or description, in which (i) is denied a place, and (iv) intentional exploration or excavation.

Firstly, both inductivists (like Hempel) and anti-inductivists (like Popper) believe in methodological monism. The plausibility of the hypothetico-deductive model of explanation authored by them squarely rests on the testability of the concerned laws and regularities. The description of the initial conditions, covered and related by laws, are bound to be sketchy. This model of explanation is often known as Covering Law Model (CLM).

Secondly, the logic of rational reconstruction is not quite different from that of CLM. In this case, the model is reconstructed or re-enacted, implicitly assuming the validity of certain laws. The particular explanatory statements purport to describe the dispositions and actions of the concerned human beings within the appropriate context. Since the context is spatio-temporally distant and, therefore, not directly surveyable, it has to be reconstructed either on the assumption of *perfect* rationality (in the analogy of the geometrical zero co-ordinate point) or under the assumption of validity of certain laws of science. Coherence is the most important requirement which needs to be satisfied by the Rational Reconstruction Model (RRM). But the model, as followed in history and anthropology e.g., is open, in principle, to possible testing evidences. In some of their works Weber and Popper have defended RRM, a flexible variant of CLM. Its basic aim is to put the *text* of action to be understood in the (reconstructed) *context* of its performance.

Thirdly, there are some pro-idealists (Croce, Collingwood and Oakshott) who maintain that socio-historical explanation consists *only* of continuous

narration or concrete description and do *not* need any covering law whatsoever. This model seeks to leave behind the abstractness or sketchiness entailed by the laws of CLM. It is generally known as Continuous Series Model (CSM). The important insight to be found in this model is derived mainly from Vico and Hegel: and it clearly recognises a “non-external” concrete nexus between the events which, taken as a whole, serve as an understanding. According to CSM, social explanation may be viewed as a (dichronical) continuum or a (synchronical) plenum.

Finally, the phenomenologist draws our attention to the “internal thread” which ties the different events narrated into a continuum or plenum. The actions and dispositions which constitute the stuff of explanation are essentially *human* and, therefore impregnated with human purpose. Man has been differently described as “self-exceeding” (Sri Aurobindo), “being there” (Heidegger) and “project” (Sartre). Underlying the formulational difference, there is a common point which highlights the presence of man in what he brings about. He is present in his dispositions to act, in the process of his actions and in the resulting products. It is this human root of socio-historical events which makes it possible for us to discover or excavate the internal thread which tie or interweave the human events together. This may be called Phenomenological Descriptive Model (PDM).

Now we will try to see very briefly how in terms of PDM we can move from human freedom to different social forms, smaller and larger.

IV

From Smaller To Larger Human Aggregates. Nobody denies that human aggregates, smaller or larger, from family, clan, commune and tribe to nation, confederation of nations, empire and the world order in the making, are basically rooted in human nature and needs. This “unanimous” view is sure to sound trivially true. But once we get into different theoretical and practical accounts of the passage from the life of the individual to that of the social aggregates, we see that behind the facade of unanimity there is substantive difference.

The naturalist-causalist tries to show that the dynamics of the passage from the individual to the aggregate is provided by *external* factors like environment and technology. The antinaturalist-teleologist is of the view that the dynamics of the passage is *internal* to the individual and his inexhaustible potentiality. Implicit in the second view is the assumption that the individual is essentially universal. The phenomenologist seeks to show that it is within human consciousness and in terms of its intentionality that one has to understand and discover the reason of the passage from the individual form of life to the social forms of life. Once the true nature of man is understood, the supposed dichotomy between “the external” dynamics and “the internal”, and the resulting debate between the defenders of the first like Marx

and those of the second like Sri Aurobindo and Hegel, turn out to be somewhat out of place. The so-called external factors like environment and technology do not work on the life of man, individual or social, in a mechanical-causal way. The social rule of man has to be rightly understood. He is not a creature caused by his circumstances. The expression "his circumstances" calls for explication. Because of his judgemental competence man can always distinguish between those factors of his environment which are beneficial to him and those which are not. His senses of *episteme* and *techné* are formed accordingly. In fact, the power of judgemental discernment, the choice of the place of habitation that man exercises and technology are expressive of the freedom of his nature. To say this is not to deny that at times causal-natural forces may overwhelm man and frustrate many of his doings and thinkings. If man-environment relation is perceptibly looked into, it becomes clear that man is simultaneously a creator and creature of his environment. There is a sort of dialectic operative between the two.

It is not at all surprising that many existentialists and phenomenologists of the Marxist persuasion are veering round to the view that once we succeed in grasping the human root of the "dialectics of nature", we will see that in the latter the former is deeply involved. "Natural thing" is not quite alien to the "human thing". If the Kantian dictum, "man makes nature possible", is one-sided and untenable, the naturalist's pronouncement, "nature makes man possible", is equally so. Nature is not there out in space-time, complete in itself, and only to be passively watched by us. Nor are we complete in ourselves, independently of, and separated from, nature⁸. Hence the point which the phenomenologist tries to bring out first in his concept of the subjectivity of the body, which is a sort of *tertium quid* between nature and self, is to show how it works as a passage from the seemingly "narrow" confines of individuality to the expanding horizons of social form, existence and meaning. The accounts of the formation of human aggregates provided by the antinaturalist-teleologist may or may not be God-based. Some thinkers like Samuel Alexander and Teilhard de Chardin start as naturalists, but end up with a type of teleology. Evolutionary transition from naturalism to supernaturalism, from causalism to purposivism, is sought to be rendered plausible in terms of qualitative emergence.⁹ There are others like Hegel and Sri Aurobindo who maintain that supernature itself is dormant present in nature. Causal forces are essentially the secret handiworks of the Divine purpose.

It is easy to show the phenomenological undertone of the second trend of social thought. Here the individual is taken to be "the self-conscious formation of life", as "our index and our foundation". The individual has in him a feeling of limitation in and around him, which he wants to do away with. In order to enlarge the horizon of his freedom and undoing the effects of limitation, he tries to internalise these limiting conditions. This process, rightly understood, is phenomenological, neither abstract-logical nor external-

technological. It is in and through the living and concrete enlargement of his consciousness that man tries to see the community, if not the unity, of his conscious life with that of his fellow human beings. The gradual self-development, self-enlargement and self-formulation of the individual is partly conscious and partly unconscious. Sri Aurobindo observes: "The primal law and purpose of the individual life is to seek its own self-development.... In the same way, the primal law and purpose of a society, community or nation is to seek its own self-development..".¹⁰

In the formation of family man finds his basic intention of self-development fulfilled. Familial relations may be conjugal and/or parental. The emergence of family is hardly datable. It is therefore taken primarily in a conceptual sense. It is a kin-group; each of its members is a relative of the others. The clan, a further enlargement of the individual life, is a compromised kin-group, compromising the uni-local residence and the unilateral descent. Both family and clan are blood-determined social units. But neither of these two has been found to be suitable for the fulfilment of growing human needs and aspirations. The community is said to be the outcome of that consciousness of lack of self-fulfilment. The community life is intended to provide its members with increased opportunity to fulfil their needs through social intercourse, adequate food through cooperative food gathering techniques, and security against illness, incapacity, or enemy attack through mutual aid and assistance. At every stage of his life, whether it is familial or communal or tribal or even national, man increasingly feels the needs of certain additional goods and services which cannot be provided by his existing social units or human aggregates. And that, in the main, accounts for the gradual enlargement of the scope of the aggregative life and increasing complexity of it, including the multiplication of needs and increase in division and stratification of labour.

The above teleological account of anthropological evolution lends itself to both phenomenological and non-phenomenological idealistic interpretations. One can substantiate it by extensively quoting, for example, from *Phenomenology of Spirit* and *Philosophy of Right* of Hegel and *The Human Cycle* and *The Ideal of Human Unity* of Sri Aurobindo. Neither Hegel nor Sri Aurobindo is a phenomenologist in any ordinary sense. But without distorting their substantive theses and forms of reasoning, it can be shown how close they stand to the views developed later on by such thinkers as Jaspers, Marcel, Heidegger and Sartre.

V

Subjectivity and Freedom: True and False. The freedom that finds expression in and through the body knows no boundary and, given will, can see enlarging horizons. The diversity of human aggregates is indicative

of different possible forms of expression of human freedom. Here freedom is to be understood primarily as an ontological phenomenon, a phenomenon which has the potentiality of growth, the actualisation of which depends much upon some attending conditions, physical, vital, psychical and socio-economic. The individual self, as indicated earlier, has been conceived as physical being (*śarīra puruṣa*), vital being (*prāṇa puruṣa*), mental being (*manomaya puruṣa*) and psychical being (*citta puruṣa*). Many sub-planes are there in each of these planes of being. The planes and sub-planes of freedom that the individual as subject can possibly enjoy are literally endless. The point has been penetratingly analysed by K. C. Bhattacharyya.¹¹

When we speak of the ontology of freedom, what we want to highlight is the *concrete* expression of it in the individual, in the social forms consisting of, and constituted by, individuals. Once the "ontology of man" is truly grasped, we have reason to prefer the expression "embodied man" to "body of man", "man *is* free" to "man *has* freedom". One is here reminded of Heidegger's "ontology of man" as Being-in-the-world.¹² The worldly character of man cannot be exhaustibly realised instantly. It is disclosed in and through time, i.e. historically. The observable physical contexts of human behaviour on their own do not provide us the reliable cues necessary for understanding what human freedom is, what are its free forms of expression. If human body is taken as a natural thing, we are landed in a sort of socio-political behaviourism, as if the body has no subjectivity or free interiority of its own. The planes and sub-planes of subjectivity of human freedom have already been briefly referred to. But the embodied context of freedom is liable to gross misunderstanding. Human body is not a thing that acts. It is, in Marcel's language, a *homo viator*, an active being. It is in his activity, in his ceaseless making or becoming, that man's true identity is to be found. Man is a being-on-the-way. The same point has been made out in a different way by Sartre when he speaks of man as a "Being which is what it is not, and which is not what it is". This existential-phenomenological insight regarding human nature is captured by Sri Aurobindo in his description of man as a perpetual "self-exceeding" creature.

Man exceeds himself because that is the expression of his inmost nature, i.e., freedom. Man's self-*projection*, self-transcendence, is essentially *evaluative* in nature. By describing its physical and physiological contexts and conditions we will not be able to show the fulsomeness of its inner drift and quality. The reason why the familial man seeks to be a tribal man, why the tribal man wants to be a national man and why the national man seeks his global identity cannot be gathered from the bare description of the surface features of our socio-historical evolution. From the *surface* structure one has to get into the *deep* structure, from *phenomenal* description to *phenomenological* description. The *active* and *sympathetic* inner characters of the social forms and the process of their formation have to be looked into.¹³ When we speak of phenomenological description of man's social self-transcendence, what

we propose to describe is the enlarging and deepening *meaning*-structure of human action and intercourse. But our aim of excavation or exploration of meaning may be defeated, if we get bogged into false subjectivism, a sort of mentalism, or false objectivism, a sort of behaviourism. In fact, we are required to grasp the *dialectical* interaction of our physiological, biological and psychological planes of life, motion and action.¹⁴ The point to be additionally noted here is that none of these planes, taken in isolation, nor all these, taken in a totality, can disclose the concreteness of meaning and value of human action and intercourse. This point has been emphasised time and again also by Sri Aurobindo.

He draws an important distinction between true subjectivism and false subjectivism. To follow this one has to first realise that "subjectivity and objectivity are not independent realities, they depend upon each other; [and that] they are the Being, through consciousness, looking at itself as subject on the object and the same Being offering itself to its own consciousness as object to the subject".¹⁵ If objectivity is construed in the naive naturalistic sense, man is led to believe that even his own body, an integral part of his Being-in-the-world, has something unrelated to his own inner moral and spiritual needs and that the satisfaction of its needs can be pursued in an *exclusive* manner. This is a dangerous belief. It leads to false subjectivism, a false dogma that the somatic being is the true seat of human identity. In ethics it gives rise to hedonism. In politics it provides the ideology of aggressive nationalism, ruthless imperialism and unprincipled hegemonism. Once man forgets his own deeper identity, inner freedom, he seeks freedom in the elimination of the conditions and the beings which appear to him as a threat to his own somatic or narrow egoistic satisfaction. Once he forgets that his own being is *in* the world and as a part of it, he may go berserk in damaging or even destroying the world which is a part of his own being. This is the philosophical point underlying Nazism and Fascism of the recent past and new colonialism of the contemporary time.

The individual man commits a grave error of judgment if he identifies himself with his immediate physical and physiological identity, forgetting his deeper and far-reaching spiritual identity. A comparable gravity of error becomes evident in the aggregative life, small and large, when it tries to understand itself, following an alien-objective method, and in terms of external circumstances, institutions and the *static* habits and forms they impress upon our otherwise *dynamic* consciousness. This external-institutional method of human sciences is methodologically inadequate and distortive and substantively, i.e., praxiologically, frustrative of our natural human *projects*. If the individual interprets himself wrongly, the wrong interpretation affects his actions and dispositions accordingly, resulting in the frustration and suspension, if not negation, of his larger aims.

NOTES AND REFERENCES

1. One naturally recalls Vico, who, even in the triumphant days of Newtonian mechanism, had the intellectual courage of writing *New Science* (1725), highlighting the self-interpreting nature of man and of all human sciences.
2. Sri Aurobindo, *The Life Divine*, I Vol. edn. New York, 1949.
3. Ludwig Wittgenstein, *Philosophical Investigations*, tr. by G.E.M. Anscombe, Macmillan, New York, 1968.
4. In this connection, I am reminded of the well-known controversy between Chomsky and Skinner on their argument in "defence" of freedom.
5. On the objective availability of body there is not much of a dispute. It is regarding the ontology of body that the disputants differ. In this connection, I find the position taken by Merleau-Ponty in such of his works as *The Structure of Behaviour*, *Phenomenology of Perception* and *Primacy of Perception* very instructive.
6. This expression is bound to remind one of Quine's expressions, "meagre input" and "torrential output", *Ontological Relativity and Other Essays*, Columbia University Press, New York, 1969, p. 83. Though Quine's and our perspectives are different, the problematique is basically similar. Consequently, the perceptive scholar can easily discover a similarity of approach in this context.
7. My position on the subject, particularly its application to different social forms, smaller and larger, may be gathered from *History Society and Polity*, Macmillan, Delhi, 1976. About the models of social explanation, see my *Individuals and Societies : A Methodological Inquiry*, (2nd edn.), Scientific Book Agency, Calcutta, 1973.
8. M. Heidegger, *Being and Time*, Harper & Row, New York, 1962, pp. 247-50.
9. See, for example, D.P. Chattopadhyaya, *Environment Evolution and Values : Studies in Man Society and Science*, South Asian Publishers, New Delhi, 1983.
10. Sri Aurobindo, *The Human Cycle*, Sri Aurobindo Ashram, Pondicherry, 1949, p. 39.
11. "The Subject As Freedom" in K.C. Bhattacharyya, *Studies in Philosophy*, Motilal Banarsidass, Delhi, 1983, pp. 367-454.
12. M. Heidegger, *op. cit.* pp. 78-90.
13. See, for example, Max Scheler's *Man's Place in Nature*, Noonday Press, Farrar Straus, New York, 1963; and Amitai Etzioni's *The Active Society*, Free Press, New York, 1963.
14. This important point has been persuasively argued by Maurice Merleau-Ponty in many of his books, including the ones quoted above (5).
15. Sri Aurobindo, *The Life Divine*, I Vol. edn. New York, 1949, p. 578.

Sri Aurobindo on Knowledge and Language

I

PREFATORY. In this Chapter I would first try to indicate the contextual character of all cultural phenomena, including language and knowledge. Secondly, an attempt will be made to outline a perspective of some leading western philosophical ideas on language and knowledge, and which, I think would help us to understand contemporary ideas on the related subjects. Thirdly, I would refer to some Indian ideas on the nature of language and knowledge which constitute the historical background of Aurobindo's own theory on the subjects. Then I propose specifically to explicate Aurobindo's views on language and knowledge. Finally, I would briefly indicate my views on the subjects.

Herodotus, the widely travelled and wise Greek historian, said about Egypt "There is no country which possesses so many wonders". Among the wonders he mentions are the climate of the country and the manners and customs of the people. He was surprised to find that the climate of the country was different from that of the rest of the world and that the people, in most of their manners and customs, were exactly reverse of the common mankind. By "mankind" he apparently meant the Greek and the related peoples of the time. He was surprised to find the Egyptians write or calculate from right to left; and not from left to right as the Greeks did; and yet they insisted that it was they who wrote from left to right. It was also a "wonder" to Herodotus that while others passed their lives separate from animals, the Egyptians had animals always living with them.¹ Apparently, Bertrand Russell also felt intrigued by the fact that animals tended to display the national characteristics of the experimenters. He notes that "animals studied by Americans rush about frantically, with an incredible display of hustle and pep, and at last achieve the desired results by chance. Animals observed by Germans sit still and think, and at last evolve the solution out of their inner consciousness".² Following the footsteps of Herodotus and Russell, and occasionally deviating from them, one might wonder, even today, why, for example, rationalism is so dear to the philosophical palate of the European theorist of knowledge; why empiricism is so much to the liking of the British theorist of knowledge; and why some or other form of

pragmatism has been espoused by American philosophers from Peirce to Quine.

One straightforward answer to the problem of Herodotus and Russell might be to point out that philosophical questions like other questions, are shaped, though a little abstractly and indirectly, by language, by attending social conditions, including the intellectual. This answer might sound Marxistic to some ears. It need not be necessarily so. Further, one might point out that these general observations co-relating theories of knowledge with language and social conditions fail to take note of many exceptional views. A somewhat parallel and related fact may be cited from the history and philosophy of religion. The statues of the Buddha found in the Indian Continent exhibit physical features of the Aryan-Indian; but those found in China and the adjacent countries exhibit the Mongoloid features. Perhaps more interesting would it be to note how, for example, Buddhism in India was influenced by Hinduism and how it influenced Hinduism, and how, in China, it was influenced by Confucianism and how it influenced Confucianism. Career and itinerary of a philosophical or religious idea may be studied in two different ways, secular and interactive. Birth, growth and decay of an idea, like those of an institution, may be studied from within, following a sort of internal dialectic. The other way of studying it would be to view and review it in relation to other prevalent ideas and institutions. It seems to me that a better understanding of both theory of knowledge and practice of it demands of us to relate them to their historical antecedents as well as contemporary social relations. One is advised to bear in mind, in this connection, that history and social relations are being continuously and differently reviewed and reinterpreted. A dialectical hermeneutic approach to epistemology is, perhaps, what should be our starting point.

II

Remarks on the Ways of Interpreting (1) Internal Dialectical Epistemology (IDE) and (2) External Dialectical Epistemology (EDE)

(i) Epistemology may be treated as a domain of psychology or cognitive psychology or philosophical anthropology. In the past, and for a long time, psychology was a respectable discipline both in India and Europe. Psychological and epistemological investigations had been intimately interrelated. Empiricists of the Buddhist and Nyāya persuasions carefully analyse the types of processes of acquisition of knowledge, somewhat in a comparable manner of Euro-American theorists of knowledge. For example, Hume, Mill, William James, and their followers significantly studied the contribution of psychology to epistemology and also the converse. I speak of “the

converse" because the acceptability of psychology as a branch of knowledge is contingent upon the very possibility of epistemology, logos of *episteme*, i.e., valid knowledge. Some logicians of the 19th century, notably Bolzano and Frege, started pleading for delinking *logic* of knowledge from *psychology* of knowledge. Their anti-psychologism influenced, among others, Husserl and Russell, whose ideas, in turn, proved very influential both in America and Europe on a broad section of (the) epistemologists. However, careful analysis of the works of such philosophers as Wittgenstein and Carnap make it clear that the efforts to banish psychology from epistemology are destined to prove artificial, painful, and abortive.

It is instructive to look back into the works of such 19th century psychologists as Helmholtz and William James, who had professional acquaintance with experimental physiology, on the one hand, and philosophy, including philosophy of science, on the other. Notwithstanding the anti-psychologism of the Husserl-Frege-Russell tradition, ambivalently endorsed by logical empiricists in the early decades of the century, the importance of psychology, more so of physiological psychology, was being increasingly recognised by a large number of theorists of knowledge. Works of Piaget, Allport, Kohler and Koffka, for example, are deemed to be significant contribution both to psychology and epistemology. Some works of Russell himself in the '20's exhibit unmistakably a psychological trait.

After the World War II, we have been witnessing the gradual emergence of cognitive psychology as a distinct discipline. In it one finds a long-prepared and much-awaited fusion of psychology and epistemology. The works of Piaget³, Eric Lenneberg⁴, for example, show a distinct revival of interest in biology and psychology with reference to epistemology and linguistics. Acquisition of language and of knowledge can hardly be separated from the attending psycho-biological processes.⁵ This point has been persuasively argued by Quine.⁶

Another interesting development which has much to do with epistemology is philosophical anthropology. The rudiments of this development are discernible in such widely different philosophical systems as those of Kant, Comte, Dilthey and Husserl. Kant very pertinently raised the anthropological question, "What is man?", with specific reference to the epistemological question, "What *can* man know?" Unless the psycho-biological capacities of man are credibly ascertained, it is very difficult to distinguish the uncritically accepted beliefs from the critically sustainable knowledge. Anthropology becomes philosophical by virtue of its critical inlook, through investigation into the conditions and limits of knowledge.

(ii) Epistemology may be seen both as a domain of anthropology and also of cosmology (or metaphysics). Like Kant and Husserl, for example, one can look into the cognitive structure of knowledge, trying to find out validating conditions of knowledge within it. This regressively discovered cognitive structure may or may not claim to be universal and necessary

and related to the world as a whole (the object of study in cosmology or metaphysics).

Some philosophers like Kant have tried to keep epistemology substantially free from metaphysics. The structure (if any) of reality, the subject-matter of metaphysics, is not in any way directly related to epistemology, though it may sustain it as its background. On the contrary, it has been said that noumenal realities transcend the bounds of scientific knowledge. What makes scientific knowledge possible, apperceptive unity of the transcendental self, is never an object of knowledge. It functions like the *Sākṣi-puruṣa*, the witnessing self, of the Vedāntic epistemology.

The subject-object duality of Kant, as we know, has been repudiated, in different ways, by Hegel, Comte, and Marx. Hegel puts epistemology *under* metaphysics and as a part of it. In his view man is a part of reality or cosmos, and therefore, whatever he can possibly know is determined in essence by the structure and process of reality. But, interestingly enough, in Hegel's view, the relation between man and reality is so intimate that man by inwardising his consciousness and knowing himself through phenomenological reflection, does gradually discover the structure and process both of his own knowledge and of reality. The parallelism between the Vedāntin's refutation of the *Sāṃkhya* dualism and Hegel's of the Kantian sort is unmistakable. It has been persuasively shown both by Sri Aurobindo and K.C. Bhattacharya. Hegel's epistemology is heavily committed to and thoroughly dependent upon metaphysics. In this sense he goes beyond Kant and returns to Leibniz. For Leibniz too knowing and being are *out and out* identical: for Hegel it is so only *at bottom*, to be dialectically discovered *step-by-step*. In fairness to Leibniz, one has to take note of his assertion that the identity of being and knowing is not equally transparent to all living and knowing beings.

Insofar as Comte is concerned, metaphysics is only partially recognised, and as a passing phase of the developing human thought. Only that part of metaphysics is recognised which can stand the test of scientific *epistemology*. In other words, scientific method would be the determining criterion of demarcation between what is real and what is not. In a way it seeks to reverse the approach of Kant. Kant wanted to make metaphysics scientific and thus vindicate it by assimilating it under the conditions which make scientific theory of knowledge possible. Hegel found in this approach a threat to the sovereignty of metaphysics, and in order to uphold that sovereignty, he wanted to show how the *human* ways of knowing flow out of the very nature of reality. Comte's intervention in this debate between Hegel and Kant is apparently more inclined towards Kant. Reality in its fullness is not accessible to the scientific way of knowing. Comte's epistemology looks forward very optimistically; Kant's, too, is confident of the successful and definitive discovery of the structural preconditions of scientific knowledge. And yet a "spirit" of agnosticism haunts the theories of knowledge of both.

(iii) The third view of epistemology as an extension of logic and language may perhaps be ascribed, without historical unfairness, to Leibniz. The controversy between Leibniz and Locke on language and in relation to epistemology is well-known; it dominated the discussion on the subject in the eighteenth century. The basic position of both of them seems to centre round the question whether language is *conventional* or *natural*. It is a part of the interesting debate on the relation between *words* and *things*, language and mind. If the object of man's study is Nature, as Locke thought it certainly was, then the question arises whether the place for language is to be found in Nature itself or it is there only for man's *convenience*, without being an integral part of Nature. In case the language is found to be a part of Nature, then words can be safely taken to be conveyors of knowledge of reality. If it is otherwise, words cannot be made to yield knowledge of reality: at best only the surface of the mind of the knower could be gathered from the words used by him and his community.

Locke writes :

Since languages, in all countries, have been established long before Sciences, so that they have not been Philosophers, or Logicians, or such who have troubled themselves about *Forms* and *Essences*, that have made the general Names, that are in use amongst the several Nations of Men: But those, more or less comprehensive terms, have for the most part, in all languages, received their Birth and Signification, from ignorant and illiterate People, who sorted and denominated Things, by those sensible Qualities they found in them.⁷

Unlike Locke and somewhat anticipating the contemporary views of Heidegger and Gadamer, Leibniz discovered a sort of essential relation, governed by the Law of Sufficient Reason, between the nature of things and the words used by peoples to designate the same. "Being the most ancient monuments of peoples, before writing and the arts, languages in general best indicate the cognations and migrations of peoples. That is why etymologies when well understood would be interesting and full of consequences". Leibniz's views on the matter have been voiced even more strongly in the following words: "I truly believe that languages are the best mirror of the human mind, and that an exact analysis of the signification of words could give insight into the operations of the understanding better than any other means".⁸ In brief, to Locke, language was only *a tool for avoiding error* in the quest of knowledge; and to Leibniz it appears to be *the mirror of the mind*.

Both Locke and, following him, Berkeley were worried about the natural imperfections of language and spoke of the necessity of undoing the same to the extent it was possible. Locke notices that words "Interpose the selves so much between our Understanding, and the Truth...that like the *Medium*

seldom cast a mist before our Eyes, and impose upon our Understanding".⁹ Berkeley in *Principles of Human Knowledge* took upon himself the task of demystifying influence of the "abuse" of words mentioned by Locke. In the *Philosophical Commentaries* he praises Locke on this count and proclaims that "the chief thing I do or pretend to do is only to remove the mist or veil of Words". In his bid to remove the "mist" and "veil" surrounding words, Berkeley, persuaded of the necessity of scientific communication of *ordered* objects of perception in terms of laws, had to dispense with the Solitary Man model of the 17th century. According to this model, the "naked truth" could be known if the knower applies his God-given mental powers without allowing them to be influenced by the figurative or rhetoric social uses of the same. He recognised that even in scientific discourse abstract use of words stand in the way of successful communication of the concerned subject. While Locke was primarily concerned to remove the *abuse* of words, creating mist, Berkeley wanted to get rid of the doctrine of *abstract* words.¹⁰ The latter had a persistent feeling that *abstraction* and *communication* beyond the permissible limits of mathematical discourses, are incompatible. He recognises the suggestive roles played by models, metaphors and analogies even in science. If the words are necessarily mystifying one wonders how by words that mist can possibly be removed or lifted. By implication, Berkeley wanted to refute Locke's suggestion of demystification by straightforward definition. To him, it was an error to believe that when a word is kept to a single definition it must always stand for the same idea.¹¹ Our natural faculties are endowed with the capacity to rise above the figurative speech-effects of ordinary language. The physical world and the physiological apparatus of man are the mind's road to God. Locke's dualism stood in his way of developing a theory of signs in terms of which linguistic signs could be shown as a transparent mirror of the signified. According to Berkeley, *sign* and the *signified* may not always, especially at the levels of commonsense and scientific discourses, distinctly correspond to each other and consequently, may not reveal the "naked truth" of the understanding, but they do have a distinct relation *ordered* by all-powerful God. Though not instantaneously, *the order* of words (as signs) reveal step-by-step, in an ascending order, *the order of things*. From the level of sense, with the aid of signs, the human minds ascend to that of notions (of Soul and God). In fact, in Berkeley's philosophy language appears as a sort of frosty mirror and the frost is due to the relative and temporary incapacity of senses—an incapacity which is gradually remedied and removed by the light of God.

Whether the said frost is irremovable or not has become a matter of controversy also in relation to Spinoza's theory of knowledge and language. It has been argued (by David Savan, e.g.) that, in spite of Spinoza's apprehension that in *natural language* philosophical truths cannot be correctly expressed and his resulting preference for the *geometrical language* in *Ethics*, he failed to show that "his writings (or anyone else's) can be a direct or

literal exposition of philosophical truth". Against this view, philosophers like G.H.R. Parkinson have maintained that not only first and second kinds of knowledge by *imagination* and by reason, but also the third kind, knowledge be *intuition*, is verily effable or expressible; in other words, language as such is not incapable of being the vehicle or the mirror of knowledge. The crux of their argument may be put in three steps: (i) that the essence of the human mind consists in knowledge alone as founded in and sustained by God; (ii) that its love for God and God's love for it *insofar as it (the human mind) is finite*, are of such a nature that it can know both the existence and the essence of the objects of knowledge; and (iii) that in the exercise of this cognitive ability of the human mind, language does *not* stand as a barrier or act as a mist. Neither the passions of the body nor the words of language stand between the knowing mind and the objects of knowledge. But the plausibility of this view hinges on the existence of God, on the affiliation of the human mind to God, and the finite determination of essential objects of knowledge so that the same can possibly be present before the human mind.¹²

Leibniz also seems to have recognised the possibility of frostiness. According to him, to be true, every proposition necessary or contingent, universal or particular, must be of such a nature that the concept of the predicate must in a sense be included in that of the subject. Take, for example, the proposition, "Gold is yellow". To be true the concept of the predicate "yellow" must be in a sense in that of "gold". The terms, "gold" and "yellow" are, for Leibniz, *concepts*, i.e., which are signified by their *names*. Names may be both proper, like "Leibniz" and "Berkeley", and common names or names of kind(s) such as "gold" and "water". One's knowledge of gold would be true when the concept of gold becomes clearer to him. If knowledge of the concept of yellow does not add to the clarity of that of gold, then in that case the predication is false. The *clarity* or *obscurity* of a notion is not necessarily to be construed as subjective. Though the relation between the concept of gold and that of yellow is open to various levels of *subjective apprehension*, (clear, not so clear, obscure, and so on), one should not think that there is no *objective foundation* of what is being apprehended, i.e., predicability of "yellow" of "gold". *In the mind of God lies the objective foundation of this predication*. Man's perceptive capacity does not, in many cases, attain apperceptive clarity. When man is able, or free enough, to apprehend the relation between the said two concepts under the aspect of God's mentality, its truth becomes manifest to him. Insofar as God is concerned, every true proposition is necessarily true. A true proposition is contingently true under the aspect of human mentality. A necessary truth is one with a finite proof; contingent truths require infinite proof. In Leibniz's thought *contingency* is closely related to human freedom. The more and more a man becomes free and is able to apprehend clearly the relation between the concepts, the more and more clearly can he see that the names signifying

concepts are constituents of a sort of universal calculus. Names as such do not hang together; they appear to do so because the significata which sustain them, i.e., concepts are internally and essentially related.

It is interesting to note that the Cartesian concept of truth as clarity *via* Spinoza deeply influenced Leibniz's view on the matter, and, further, that Descartes, Spinozas, Leibniz and Berkeley—all the four had to invoke, of course in different ways, the concept of all-knowing God in order to define the relation between names (words), concepts (objects), and acts of knowing. They were trying in ingenious ways to remove the ambiguities and obscurities native to natural language. This is, however, not to say that they did not realise the necessity of natural language for the purpose of communication with people who are not professionally initiated in philosophy (including natural philosophy). They did, but in different ways, and according to their own individual lights.

III

Some Comparable Indian and Western Ideas. The ideas referred to before under the headings of (1) Internal Dialectical Epistemology (IDE) and (2) External Dialectical Epistemology (EDE) are not peculiar to the History of Western Philosophy. Comparable ideas, not necessarily same in details, have also dominated the past of the Indian philosophy. Since the basic problems of philosophy, like those of other areas of the human life, thought, and action, are similar in different cultures, their proposed solutions cannot be totally dissimilar. Their similarities and differences may be profitably studied both conceptually, i.e., in an inter-cultural way, and historically, i.e., in an intra-cultural way.

One observes, broadly speaking, two relatively distinct trends in the Indian philosophical tradition, (A) the *ātmavādi* (self-centric) Vedic and (B) the *anātmavādi* (not self-centric) non-Vedic or Buddhist. If the Advaita Vedānta (a non-dualistic monism) is the paradigm of (A), then the Mādhyamika (the middle way of fluxist) system is that of (B). The former finds in the Self the definitive foundation of knowledge, the latter finds self itself elusive, if not non-existent, and knowledge (or whatever we mean by it) without foundation. The robust ontology of the former has given rise to several systems within its own circle and the tenuous ontology of the latter has yielded several systems of sceptical epistemology also marked by considerable internal differences. In fact, the Advaita Vedānta is a dialectical reaction against the Sāṃkhya dualism and the Mādhyamika against the pluralism of the Abhidhārmika system (including Theravāda and Sarvāstivāda). To the Sāṃkhya, the *relation* between the self (*puruṣa*) and nature (*prakṛti*) is an appearance, but not either of the basic two substances. It speaks of two kinds of real-unchanging *puruṣa* (*Kūṣastha*) and the changing

Prakṛti (pariṇāmi). Change is self-becoming. Identical at bottom are that which changes and that into which it changes (sat-kāryavāda). The difference between the two is one of that between the potential (avyakta) and the actual (vyakta). Nature is self-identical energy-stuff with difference or change in it. It exists by itself but not for itself. It exists and acts for the Self (puruṣa). The identity aspect of the Sāṃkhya anticipates the Vedānta; but its aspect of "not for itself" is anti-Vedāntic. Its ambivalence is interesting.

To the Mādhyamika, on the other hand, neither of the so-called permanent substances, self or nature, is real: both are constructs of uncritical mind by its subjective forms super-imposed on what really are momentary particular elements of existence. Both are elusive and illusory. Nothing is permanent or substantive. Only the momentary and separate perceptible elements are to be recognised as real. This view anticipates Hume clearly and also Kant, in a way, by ascribing the origin of the concept of substance to non-empirical and beginningless avidyā. Pushing the role of subjectivity further deep, the Mādhyamika points out that not only the concept of substances but also the concepts of cause, change, existence, and non-existence all are within its reach. In its extreme form the theory of subjectivity denies both self and non-self, seeks to refute all forms of metaphysical speculation, and affirms that true wisdom (Prajñā) consists in the negation of all forms of uncritical views—Śūnyatā. What is avidyā for the Mādhyamika is real for the Sāṃkhya and the Vedānta and vice versa. The Advaita Vedānta does recognise the role of avidyā in and defines it as that which makes Being appear as Becoming, the universal as particulars, the identical as different. The Vijñānavādi Buddhist, committed as he is to the reality of consciousness as Will, defines Avidyā as Vijñāna as engaged in an encounter with an object—an inherent duality of the knower and the known.

The role of the subjective is relegated to the minimum, almost denied by the realistic and pluralistic systems, the Nyāya, the Mīmāṃsā and the Jaina. For them, the forms of thought are also the forms of what is objectively real. Reals, according to them, are purified forms of thought. Everything, self and knowledge, is object (viśaya, padārtha, jñeya). Objectivity (viśayatā) is three-fold—substantive (viśeṣya), adjective (viśeṣaṇa) and relation (saṃbandha). The human knowledge is necessarily of this form. And, consequently, there obtains one-one correspondence between thoughts and things. The basic categories of thoughts and things are irreducible. Irreducible is the relation between the subjective and the objective. A sort of picturesque isomorphism.

This might lead some to study the parallelism between these views and those of the early Wittgenstein and the contemporary essentialists like Kripke. The study might yield interesting results. But like all such context-free cases of parallelism, and comparative studies in the same, without critical care and caution, might prove facile, if not misleading.

One way of refuting scepticism is to stick to the foundationalist *ātmavādi* (or self-centric) theory of knowledge and emphasise the role of such concepts as unity, identity and universality. Everything is eternal. The Sāṅkhya followed this way and ended up with *satkāryavāda*, the view that effect is in the cause and that, therefore, *genuine* causation or production of effect is illusory. The realist Buddhist (Vaiśhāṣika) system of Vasubandhu reaches the same impasse via another route.¹³ Its two main theses are (1) denial of soul-substance and (2) universal impermanence of discrete momentary reals. In brief, everything is momentary. Vasubandhu would say that the reality of the whole (*avyavi*) and that of the universal (*sāmānya*) cannot be logically sustained. Called upon to explain the fact of change, the Sāṅkhya (*ātmavādi*) and the Vaiśhāṣika Buddhist (*nairātmavādi*) face the same dilemma of non-causation from two different ends. If the cause is different from the effect and the two are unrelated, as Vasubandhu claims, one cannot give rise to or produce the other. Nāgārjuna, the Mādhyamika points out, a combination of the Sāṅkhya and the Vaiśhāṣika views would be open to the charges sustainable against each. From this he concludes that scepticism is not refutable either by merely affirming the theory of self nor by merely denying that. Self-based foundationalism and anti-foundationalism based on the denial of self are two antinomical extremes of the speculative metaphysic of the *subjective* experience trying to explain both the origin of knowledge and that of its objects in terms of its set patterns (*samskāras*) without critically investigating into the conditions of its metaphysical claims. In the positive part of his view or vision (*not* an abstract doctrine) the Mādhyamika reminds us of the Buddha's aversion to every sort of abstract and un-lived metaphysical speculation as the (or even a) solution of the practical, i.e. ethico-religious, problems of the human life. We must have *Prajñā* or *intuition* of the *Real* which is *Absolute* (*ly*) devoid (*Śūnya*) of origination, cessation, change, being, becoming, decay, and death. And we are repeatedly warned to bear in mind that this view embodies a vision or an intuition and *not* to be taken as another speculative metaphysical theory.

Nāgārjuna's devastating dialectic is bound to remind one of Hume's critique of causation and induction, Kant's *partial* vindication of the same, and Wittgenstein's scepticism over and argument against "private language". To my mind the structure of the arguments of Nāgārjuna, Hume and the later Wittgenstein have *some* features in common, especially those intended to show the inadequacy of the pre-critical claims of pure or theoretical reason. Even Kant's "vindication", to the extent it is claimed to be successful against the sceptics' attacks, is, on scrutiny, found to be contingent upon the infallibility of a particular system of Physics and the supposed uniqueness of a particular system of Geometry. When it comes to the more "positive" and "directly transcendental" part of his vindication of the theoretical knowledge, Kant seems to be even more uncritical—uncritically committed to what appears to him *unavoidable* presupposition of Self, the supreme "I think"

principle of the Cartesian sort. Of course, Kant with his characteristic modesty, acknowledges the "ideal" nature of the transcendental foundation of empirical knowledge. Kant's foundational epistemology is pre-suppositional or non-propositional at its best and shares all the weakness of private language at its worst (unless, of course, one is outright prepared to concede uncritically that "I think" is an inseparable part of a universal language sanctioned by all-unifying God as Descartes, Spinoza, and Leibniz claimed before). I feel neither Nāgārjuna has been properly answered by the Advaita Vedānta and the Nyāya-Vaiśeṣika nor Hume by Kant and Popper. By the same token, I also feel Kripke's attempts to understand and solve the later Wittgenstein's paradox of private language are unpromising. The basic weakness of the foundationalist theories of knowledge lies in their giving primacy to theoretical reason and all that it entails—undue role to certain intuitive and uncheckable presuppositions, the logic of identity and necessity.

The answers of Nāgārjuna, Hume and the later Wittgenstein to the basic ontological question "what is there" are, on analysis, found to be similar. Nāgārjuna says "It may be (1) X or (2) not-X or (3) both X and not-X or (4) neither X nor not-X." He does not take any in-between position: for, according to him, the middle is no position: Reality is beyond speech, unpredicable, not demonstratively symbolisable. Hume would say, "I can name it or speak about X, relying upon the impressions I have of "its" qualities and using conventionally available names and other expressions." The like response of Wittgenstein is: "What X is may be decided upon provided we agree upon, in advance, that we "know" where we are, who "We" are—the speakers(s) and the hearer(s) etc., when the discourse is taking place, and the language of the discourse is sharable and so on". The responses of each one of these three sceptics to the basic ontological question may be summed up in two words "It depends". Nameability and predicability of, say X, depends upon so many linguistic and other contextual questions. At one stage, perhaps the last stage, Nāgārjuna would part company with Hume and Wittgenstein and say: The supreme Reality, which is truly unconditioned, can be grasped by intuition and also communicated to the properly initiated and instructed person but not expressible in ordinary language.

All sceptics from Nāgārjuna and Sextus Empiricus to Hume and Wittgenstein who tried to expound and defend their views in words (and *not* preferred silence on the ground that the consistent sceptic should not either assert or deny a particular position), have suggested one or other practical way out of the impasse attending their *theoretical* stand. For Nāgārjuna, as we have seen, the way out is an intuitive apprehension of Reality (Śūnya). For Sextus, Hume and Wittgenstein it is to follow a set of socio-linguistic customs, or community practices, or a form of life. Kant claims to have saved his empiricism from falling to the abyss of scepticism by tying it up to the transcendental self *qua* the supreme enabling principle of knowledge.

During the last sixty years or so Kant's thought has proved very influen-

tial both in Europe and America, primarily because of two reasons—its scientific orientation and attempt to defend religion and ethics on the basis of a modest metaphysics and consistently with its basic orientation. It is interesting to note that philosophers of such different persuasions as C.I. Lewis (America), K.C. Bhattacharya (India), Reichenbach (Germany-USA), Heidegger (Germany), Popper (Austria-UK) and Strawson (UK) have, in different ways and degrees, taken serious note of Kant's thought.

In the last two decades an ingenious metaphysical-semantic initiative largely under the influence of Leibnizian essentialism and Tarski's theory of truth has been taken up by Kripke, Putnam and Donnellan to remove the empiricist elements of the Russell-Quine tradition and to rehabilitate the spirit of classical rationalism. The essentialist theory of knowledge is mainly based upon a reference-paradigm one-rayed theory of meaning of naming and descriptive terms. Corresponding to every meaningful term, there is said to be some referent, concept, intention, or cluster of features associated with it. To understand a term is to know its meaning.

The neo-essentialist attacks both the traditional theory of proper names and that of common nouns. Their targets of attack include not only Locke, Berkeley, Hume, and Mill but also Frege, Russell, Lewis, Quine and Searle. According to him, there is definite referents not only of "Plato", "the teacher of Aristotle", "Kautilya", "the author of arthaśāstra" but also of "gold", "water", "the Group of 77". The process of thinking out of the ontological commitment or referent of proper name initiated by Russell's theory of definite description and carried out by Quine to its logical consequences, namely, ontology as values of variables and denial of the asymmetry between the referents of subject terms and predicate terms of a logical proposition has been strongly opposed by the neo-essentialist on several counts. If, logically a name, "Plato" for example, properly names, or rigidly designates, an individual Plato, then the defender of this view says, it names or designates this individual in all possible situations (or worlds), including the counterfactual ones, irrespective of other commonly available descriptions of this individual. In other words, "Plato" designates Plato irrespective of the possible historical discovery in the future that the widely entertained current historical view that Plato taught Aristotle is false. The relation between the name "Plato" and the individual so named, Plato, is logically so rigid that it is not contingent upon its being known at any time and at any place. The logical status of this relation is metaphysically and objectively so sustained that to ask for its epistemological justification is not only objected to as otiose but also said to be misconceived.¹⁴

The neo-essentialist extends his basic thesis of proper names to common names (or nouns) like "cow", "gold" and "water" standing for putative natural kinds. The term "cow" would not be a rigid designator of the animal species or natural kind called cow if its referential capacity is contingent upon some analytically specifiable conjunction of properties. The

properties of having four feet, two horns, a tail, a hump etc., for example, are neither sufficient nor necessary to make a cow what it essentially is. This cluster of properties may be found in some other animal(s). If the identifying describability of cow is said to be contingent upon the said properties, then we are caught in a vicious circle. A species is called "cow" because of these listed properties and these listed properties are properties of cow (what should we say?) (a) because cow is cow irrespective of these listed properties or (b) because these listed properties are properties of cow. For the neo-essentialist (a) is the only promising way out of the vicious circle: i.e. cow is cow *irrespective of these listed properties*. To him (b) is *not* promising; for the expression "of cow" of (b) begs the very question "what cow is?" instead of answering it. The essential properties of cow, let us call them $C(x)$, $C(y)$, $C(z)$... $C(n)$, may remain unknown yet be constitutive of the identity of cow as cow. The necessary properties of cow, $c(x)$, $c(y)$, $c(z)$... $c(n)$ are not known a priori. By defending the possibility of *necessary a posteriori* truths the neo-essentialist tries to save Kant's epistemological insight from its dogmatic association and upholds intuition or postulation as a source of metaphysical as well as scientific knowledge. By implication the possibility is kept open for *new* knowledge of *other* (other than the *currently* known) essential and constitutive properties of the concerned natural kind. The neo-essentialists' theory of natural kinds assigns a very restricted role to the descriptive properties, viz. that of fixing or indicating referents. The said properties are *not* intended to be surrogates for, or provide analytic definition of, general terms designating natural kinds. Given this theory, it has been claimed by Kripke, Donnellan and Putnam, among others, such propositions as "Water is H_2O " and "Gold is yellow" are neither analytic nor necessary. If descriptive properties commonly associated with natural kinds do not or cannot fix their referents, the important question remains, "What is it does this job"? "By a casual chain initially" says Kripke and Putnam and "by historical explanation" says Donnellan. Though Donnellan himself speaks of the inadequacy of the casual thesis because of its failure to take note of its contextual character, his own historical thesis seems to be vulnerable on the identical ground if the history of initial and subsequent baptism (of referent(s)—fixation) is not a view (and reviews) of an all-knowing individual God-like being.

The main weakness of the neo-essentialist theory of proper and common names lies in its understanding the contextual character of referent-fixing acts, including the speech ones. The point has been argued, among others, by Quine, Goodman, Strawson, Evans, Searle and linguists like Lyons. The very fact that he, unlike the classical essentialist, feels obliged to address himself to the question of casual or historical baptism is instructive. It reveals at least two things. First, he wants to go ahead without the traditional all-knowing God-hypothesis ensuring the historically un-interruptable relation between genuinely naming terms and their referents. Secondly, his

anxiety to establish the non-analytic character of such propositions as "Gold is yellow" and "Water is H_2O ".

My main uneasiness with the neo-essentialist theory of naming is this. Whatever (of non-analytic propositions) is established casually or historically is also dis-establishable. If that is conceded, the claim of rigidity or logical propriety of the "new" naming theory is seriously compromised. If that is not, the very attempts to introduce the auxiliary-but-significant casual or historical hypothesis and to prove the existence of necessary a posteriori truths turn out to be unintelligible at worst and unsustainable at best. "Gold" can be a rigid designator of gold if and only if the cluster of its essential properties, known and knowable, remains identical not only locally but also globally, i.e., in all possible situations (or worlds) including the counterfactual ones. If the existence of the essential properties constitutive of gold is a matter of metaphysical presupposition as distinguished from epistemologically ascertainable proposition, one is free to resort to convenient presupposition which is metaphysically called for according to one's practical taste for one's theory of natural kinds. The neo-essentialist makes extra-liberal use of the classical rationalist principle of *esse est concipi*. It is in this context, one should, I feel, profitably recall the role(s) that Berkeley, Spinoza and Leibniz are logically obliged to assign, of course in different ways, to God in their theories of knowledge and language. A comparable view is to be found in Śabda-Brahma-Vāda (the theory of Sound-as Absolute expressed in language) of the Vaiyākaranas (the grammarians of the Advaita system).

In respect of logical propriety of naming natural kinds, another objection that has been raised in different forms is this. Reality knows no natural kinds. In other words, natural kinds are mental constructs, as Nāgārjuna, Śāṅkara, Kant and Bradley, e.g., maintain, and have no metaphysically sustainable status. Even at the empirical level, in such primarily taxonomic disciplines as botany and zoology, e.g., the concept of kinds often undergoes change, and also change their definitions.¹⁵ I can well visualise how the neo-essentialist can defend, perhaps with some plausibility, his view on the matter against this objection. The essential properties of a natural kind may be historically or empirically discovered or lost sight of calling forth new classification or definition: and this fact as such can hardly be construed as a strong argument. However, the main objection, already mentioned, remains: namely, it is difficult to understand how nominal essence (that which is common to different linguistic equivalents of "gold" e.g.), if any, rigidly designates or transparently expresses what gold, in reality, is. Are not we, the humans *belonging* to different cultures and *speaking* different languages, objectively obliged to name and classify the objects and kinds of knowledge somewhat differently? The other end of the same point may perhaps be put thus: nothing in reality, neither what is named by "this", "that" etc. nor "gold", "water" etc. is named in an *unconditioned* or absolute

way. Cultural and linguistic relativity of naming is an aspect of ontological relativity. Denial of it obliges one to fall back upon an uncritical metaphysical realism devoid of any epistemic accountability.

It is instructive to recall in this connection the metaphysical holism of thinkers like Bradley and Aurobindo who deny the possibility of genuine existential judgment with "this" or "that" particular term as its subject. Every "this" or "that" is a conditioned existent part of a larger whole, a more real whole. The ultimate Reality, the largest Whole, according to Śankara, Hegel and Bradley, knows no part, neither "this/that" nor "this kind/that kind", in it. Unlike the *absolute* monist, the *integral* monist, Aurobindo e.g., insists on the existence of *individual* parts in the Whole as its self-determined forms and affirms that the same can be *known* by intuition, i.e., without *postulating* the same as a metaphysical necessity. For the latter, Reality is an *integral* (and not an absolute) Whole. This theory of knowledge and that of language, though akin in some important respects to those of classical rationalists, deserve independent and careful attention and analysis. He finds the paradigm of clarity of language, so dear to the neo-essentialist, *necessarily* elusive. How language, instead of revealing or expressing reality, often envelops or suppresses it, is a point of profound interest to Aurobindo. Pictures of reality are conditioned not only metaphysically, by the nature of reality itself, but also, as I have mentioned earlier, by language, which partly expresses and partly suppresses what reality is (what reals are). I do not propose to defend the strong way of dividing up reality or categorising its objects (and kinds). Pictures (not *the* picture) of reality obtained in and through different language(s) are not to be construed in solipsistic manner(s) for that lands us in a self-defeating epistemology as pointed out by thinkers like Bernard Williams.¹⁶ But from this argument, one must not hastily conclude that language and its uses have no say in our determination of what reality is like. To avoid self-defeating relativism, one need not resort to dogmatic neo-essentialism. Acts of referring by speech or otherwise do enter into the determination of what is being (or, in some specifiable circumstances, can possibly be) referred to. One's or one society's, i.e., one language group's, ways of referring, by names or identifying descriptions, cannot be validly universalised. The conditions which make names *proper* and descriptions *true* are not context-free. In other words, this point cannot be used for the purpose(s) of *propriety*-determination of *truth*-determination independently of the determinate context of the speaker-hearer-interpreter.

Though surprising, it is true that the Eskimos of Greenland have no single, general, word for snow; that in many of the aboriginal languages of Australia—in the desert areas of Australia—there is no word for sand; and that no word for camels as such is available in Arabic. Such common English words as "brown", "monkey", "chair", "jug", "carpet" cannot be translated exactly into French.¹⁷ In every language there are certain words or expressions which are not to be found and can hardly be translated into

other languages preserving “identical” referents or/and senses. The easy way of getting to language-natural one-rayed referents of cultural-neutral translational equivalent is not at all dependable. At times these are not even available. Codification or documentation or “practical ways of referring”, though necessary, cannot truly ensure “standard” referential meaning. De-linking our ways of referring from actual social forms of life and embalming them in dictionaries prove nothing more than freezing the problems of naming (without trying to solve the same). The later Wittgenstein’s and Quine’s queries on the issues have not yet been answered by Putnam and Kripke. I think that unless the conditions under which naming turns out to be *proper* and description *true* are spelled out, an intuitive notion of correspondence theory of truth by itself does not get one nearer to the solution of the problem of reference. An adequate theory of reference must be a part of a comprehensive theory of understanding. Acts of referring succeed or fail to succeed within an *understandable* situation, i.e., under certain presuppositions. The point has been argued in the recent past, among others, by Strawson, Dummett, and McDowell. Earlier in a related context Whitehead spoke of the “handiness” of referring symbols and of their “pragmatic justification,... (M)eanings are often shifting and indeterminate... (T)he errors of symbolism can never be wholly avoided”.¹⁸ I recall Whitehead primarily for two reasons. First, he tries to reconcile a “pragmatic” account of referential symbolism at the bottom with a metaphysical coherent theory of truth at the top. And, secondly, the supreme sustaining principle of truth is claimed to be God, whose nature is the basic ground of coherence between the referring symbol and the referred to “object”, thing or person. Whitehead’s theory of language reminds me Leibniz’s and Berkeley’s.

I think that the basic point we must bear in mind while we are seriously engaged in understanding the true nature of language and that of knowledge is the *human* (and *not* divine) foundation of symbolism. The human ways and acts of symbolisation cannot be free from the consequences of human fallibility. We must remember that the Adamic ways of naming the natural kinds have proved as fallible as Adam himself. To this point I shall revert later on (in Section V).

IV

Aurobindo’s theory of language and knowledge. In this section I would like to look closely into some insightful ideas of Aurobindo on the nature of language and knowledge. Though Aurobindo seems to have deep familiarity with the essentials of the two main philosophical currents of Europe, Rationalism and Empiricism, his own point of departure is primarily Śāṅkarite Advaita Vedānta and, secondarily, Sāṅkhya dualism. His cast of mind, in the main, is metaphysical and mystical. But his affirmative attitude to the

importance of modern science, technology, and civilisation has consistently induced him to take positivism in general, i.e., not with reference to a particular group or school of thinkers, with due seriousness. I attribute this attitude of Aurobindo to his profound historical sense. Very unlike many other mystic metaphysicians of his time, Aurobindo has tried his level best to grasp and interpret the necessity, prospects and limits of the scientific views of the world. Partly this accounts for his consistent opposition to *māyāvāda* or what he calls illusionism and *qualified* sympathy for the Sāṅkhya dualism. Whether his understanding of *māyāvāda* is textually correct or his refutation of it logically sound is not what I am considering at the moment. According to Aurobindo's "integral monism" (*Purnādvaitvāda*), the ultimate Reality, the Absolute, tolerates, needs and sustains individuals in it in a much transformed integrated manner. Both empirical and rational modes of knowledge of reality, though necessary, are *not* adequate. He defends an *intuitive* theory of knowledge which is different in many ways from the classical rationalist's. His highly original views on language make this abundantly clear. His hermeneutic approach reminds me of Vico's and Heidegger's. All of them are seriously concerned with the cognitive import of figurative and symbolic languages.

Clarity of language is suspect to Aurobindo's mind. When our language is clear,—apparently clear, to be precise, we are speaking of and dealing with only the surface features of named objects. "Clear and distinct ideas" of the classical rationalist do not truly reveal the nature of essentially undifferentiated reality. Clarity of language and clarity of knowledge, as we ordinarily understand these expressions, are human constructs, devised by the human mind, fed by the physical senses, feeding the information obtained from the world (supposedly external to it). Subject-object duality or the widely and uncritically accepted hypothesis that the knower is *separated* from the known is unacceptable to Aurobindo. This is the error of the Sāṅkhya, the Cartesian, and the Kantian. He is aware that the "metaphysical solution" that he would offer of the impasse might "not be satisfying...for the logical mind". Yet in search of that metaphysical solution of the epistemological problem

...we must dare to go below the *clear surfaces of things on which the mind loves to dwell*, to tempt the vast and obscure, to penetrate the unfathomable depths of consciousness and *identify ourselves with states of being that are not our own*. Human language is a poor help in such a search, but at best we may find in it some *symbols and figures*, return with some just expressible *hints* which will help the *light of the soul* and throw upon the mind some *reflection of the ineffable decision*".¹⁹

Supreme Reality, according to Aurobindo, is eternal, absolute and infinite. In its essence it is indeterminable. To the "finite and defining Mind"

it is “indefinable and inconceivable”. By a “mind-created speech” it is “ineffable”. Echoing Nāgārjuna’s dialectic Aurobindo writes: “it is describable neither by our negations, *neti neti*,—for we cannot limit it by saying it is not this, it is not that,—nor by our affirmations, for we cannot fix it by saying it is this, it is that, *iti iti*. “Though reality as reality is “indefinable”, “inconceivable”, “indescribable”, and “ineffable by a mind-created speech” in some *specific* and *definite* ways, it would not be correct to think that it is *strictly* unknowable. Aurobindo is not agnostic even in the qualified Kantian sense. He affirms, “it is not altogether and in every way unknowable”. Naturally, the question arises, “In which way the inexpressible is knowable?” His answer is: “It is self-evident to itself...and to a *knowledge by identity* of which the spiritual being in us must be capable; for that spiritual being is in its essence and its original and intimate reality not other than this Supreme Existence.” (my emphasis). Knowledge of reality is a sort of “spiritual intuition”, *not* “conceptual cognition” or “intellectual understanding”. It is a sort of *direct* encounter between the self (with a small s) and the Self (with a capital S), *ātmasākṣātkāra*.²⁰

Two points are to be noted here. One: a critique of conceptual understanding; and, two: a critique of logical language. In fact, these two points, in Aurobindo’s system of philosophy, are inseparable. They represent the ways in which the sense-bound mind of ours is obliged to work. Conceptual understanding is a set of workings of our intellect. Its main concerns are defining, classifying, analysing, organising, ordering, ratiocinating and systematising. *Indirectly* informed of the powers of the self, of the unsettling effects of those powers on what the sense-mind can possibly achieve by deploying its above mentioned logical operations, the human mind feels insecure and seeks some (seemingly elusive) foundation. The next best alternative available to it is a “critical control”. “(T)he action of our intellect is primarily the function of understanding, but secondarily critical and finally organising, controlling and formative”²¹. It is because of our awareness of the inadequacy of the understanding that we try to be critical of its functioning with a view to remedy and remove the inadequacy. The very fact that our mind *can* be critical of its own functioning is, to Aurobindo, indicative of a deeper *ability*,—a partly *concealed* ability to which the deficiency and abstractness of our intellectual understanding is *revealed* and *disclosed*. That “deeper ability” is grounded in the human mind’s affiliation to the Universal Spirit, the Supreme Reality. The grounding itself is multi-dimensional but not uniformly so. When in our quest for knowledge, we insist upon the individuality of our mind, we are guided more by our somewhat *peculiar* sense-images and externally generated wills and actions, which leave their deep imprint on the end-product, knowledge itself, seemingly cut-off and separated from the Universal Spirit, its essential foundation and ultimate justification. This “egocentric individuality” finds itself not only against its own essential identity with the spiritual infinite but also against “the cosmic

infinite". As a result its knowledge in its initial stage is *primarily a matter of reception* of the forces and messages of the external world, of the not-self. In brief, at the first dimension of knowledge it is almost entirely an *imposition of the not-self on the self*,—the self not yet reflectively aware of its affiliation to what it essentially is. At this stage the knower's "self-ignorance" "dotted and sectioned by points or figures of precision", though doubly disturbed, by vague awareness of its inner and richer potentiality, on the one hand, and by discordant notes received through the sense-mind from the outer world, on the other, tries to hang on awkwardly, for practical reason, on its unstable "mental structure of apparent self". Mind, a formation of the "outer self", works through some imperfect imagist concepts, and under certain uncontrollable habits and expectations, and cannot stop manipulating the symbols and figures it uses for the purpose of understanding. Behind and below "the outer self" there is, says Aurobindo, "the inner self", the psychic being or *caitya puruṣa*, which witnesses imperfect workings of "the outer self" without being involved in or subject to the same. More powerful, subtle and free than the mental self is what Aurobindo calls *the subliminal self*. Compared to the former it is less "involved, bound, hampered, conditioned...by the body...and the limitations of the nerve-system and the physical organs". Consequently, the reach of its memory is very wide, its will-powers do not distort the inflow of the outer information or interfere with the outflow of consciousness in the formations of objects (of knowledge), and the concepts it works with do not suffer imagist sketchiness and rigidity and are very plastic in their continuous formation and transformation. Veiled in the subliminal self steadily and silently lies the true seat of our knowledge, or the *cosmic self*, in Aurobindo's language.

Ego-centric division or categorisation of the world is not there in the knowledge of the cosmic self. The inflow and the outflow of (the information of) matter and life are *indivisible* from this point of view. It needs no concept and uses no concept. At this stage, free from ego-centricity, the individual becomes the universal and knows it as such. The results are numerous: namely, an entire openness of the self to the energies or powers and movements of the universe; a certain sense of unity of the individual with the cosmos; and a greater feeling of unity with other beings. "(T)he cosmic consciousness of things (and beings)", says Aurobindo, "is founded upon knowledge by identity".²² Knowledge by identity, or true knowledge, is available only to the cosmic self, —*not* to the individual self, or even to the subliminal self. Aurobindo's critique of conceptual understanding purports to show both the *inadequacy* and the necessity not only of knowledge but also of logical language.

The general term used by Aurobindo to denote the inadequate forms of knowledge is *separative knowledge*, knowledge resting on the presupposition of the separation of the (knowing) *self* from the (known/knowable) *not-self*. The regressive argument of the critique shows the metaphysical route from

separative knowledge to *knowledge by identity*, progressively knowing the identity between the self and the not-self, which, metaphysically speaking, is already there. The veritable form of knowledge, maintains Aurobindo, makes the poverty of logical language very clear. "The logic of the finite" accepts uncritically not only the separation of the knower from the known but also that of name from nominatum, symbol from what is symbolised. This "uncritical" metaphysical presupposition is unacceptable to Aurobindo. Collateral to this uncritical metaphysics is an uncritical view of "logical language", which is equally unacceptable to him. And his critique of logical language tries to spell out the underlying considerations.

Aurobindo's problem, in brief, is this. The finite man intends to know and express the infinite. Interestingly enough, his intention itself is sustained by his partly concealed and partly disclosed expression of his infinity. Impelled to express what he is and what he knows, the finite and fallible man is obliged to make use of the logical concepts and language which turn out to be imperfect and inadequate—imperfect and inadequate even to his own understanding, provided, of course, his understanding reaches its critically self-reflective level, i.e., rises above and sheds off its habitual, repetitive and conformative workings. "The logic of the finite is the magic in the Infinite", says Aurobindo. Before I offer my interpretation of his enigmatic expressions of a sort on the point let me quote a few insightful of them:

But the being and action of the Infinite must not be therefore regarded as if it were a magic void of all reason; there is, on the contrary, a greater reason in all the operations of the Infinite, but it is not a mental or intellectual, it is spiritual and supramental reason; *there is a logic in it*, because there are relations and connections infallibly seen and excited; *what is magic to our finite reason.*²³

Our reasoning is based upon our experience of the finite operations of physical Nature, on the incomplete observation and uncertain understanding of something that acts within limits; it has organised on that basis certain conceptions which it seeks to make general and universal, and *whatever contradicts or departs from these conceptions it regards as irrational, false or inexplicable.*²⁴

(W)e are obliged to use abstract conceptions and defining words and ideas for something that is not abstract, something that is spiritually living and intensely real. *Our abstractions get fixed into differentiating concepts with sharp lines between them; but the Reality is not of that nature; its aspects are many but shade off into each other.* Its truth could only be rendered by *ideas and images metaphysical and yet living and concrete*—images which might be taken by the Pure Reason as figures and symbols but are more than that and mean more to the intuitive vision and feeling, for they are realities of a dynamic spiritual experience.²⁵

Referring to the difficulty of how possibly the individual can know, progressively, through the process of evolution, the Absolute and the External, Aurobindo observes:

This is a difficulty of the logical reason and must be met by a larger and more catholic enlightening reason...It can indeed be met also by a dialectical battle, a logomachy of the logical mind; but that by itself is an artificial method, often a futile combat...*Logical reasoning is useful and indispensable in its own field in order to give the mind a certain clearness, precision and subtlety in dealing with its own ideas and word-symbols...*It is much more efficiently a guardian against errors than a discoverer of truth...²⁶.

*All affirmations and negations are expressive of (the Absolute's) aspects, and it is through both a supreme affirmation and a supreme negation that we can arrive at the Absolute...*The Absolute cannot be bound in its nature to manifest a cosmos of relations, but neither cannot be bound not to manifest any cosmos. It is not itself a sheer emptiness; for a vacant Absolute is no Absolute,—our conception of a Void or Zero is only a conceptual sign of our mental inability to know...it bears in itself some ineffable essentiality of all that is and all that can be; and since it holds in itself this essentiality and this possibility, it must also hold in itself in some way of its absoluteness either the permanent truth or the inherent, even if latent, realisable actuality of all that is fundamental to our or the world's existence".²⁷

(I)t is the reasoning which is the most satisfactory to the simply rational mind. Yet is there here a *triple error*, the error of *making an unbridgeable gulf between the Absolute and the relative*, the error of *making too simple and rigid and extending too far the law of contradictions* and the error of *conceiving in terms of time the genesis of things which have their origin and first habitat in the Eternal*.²⁸

Aurobindo's main complaint against what we regard well-defined and precise logical language is that it is misplaced and misconceived. "Misconceived" because to it we attribute qualities which we think can enable us to handle efficiently our problems of knowledge. Aurobindo contests this conception. Logical language, "an instrument of ignorance", uses clear and well-defined terms in the discourse where the objects so termed and defined do not in fact, in their real nature, know any terminus but "shade off into each other". It works "more efficiently" as "a guardian against error" than as "a discoverer of truth". In fairness to logicians, it has to be admitted that there is hardly a lobby of theirs which claims to have invented a logic of discovery of truths. Logic's primary concerns are ordering, organizing, definition, classification and proof. Aurobindo assigns to logic "controlled checking" as its main function. Though it sounds negative but it is not entirely so. Within the scope of empirical sciences, as distinguished from that of

metaphysical ones, logic or logical language has a positive role, precision, and subtlety "within its own ideas and word-symbols".

Logical language poses the fallacies of misplacement when we seek to use it in the transcendental discourse where Aurobindo is against the extension of the "simple and rigid" language of perceptual sciences to transcendental ones. The expressions and statements of a language are said to be intelligible only on the assumption of separation between them and what is sought to be expressed and stated. This assumption, as I have already pointed out, is rejected by Aurobindo. For the sort of knowledge it leads to, separative knowledge, is superficial, only seemingly solid, and in need of endless verification. While knowledge by identity is available *in principle* to every person unaided by machine, formula, and other enlightened persons, separative knowledge cannot be truly understood and judged without some training imparted by the professionals in the concerned lines.²⁹ In the limited sphere of scientific knowledge, separative knowledge, logical language has its important uses, but when it is sought to be used in the deeper and higher planes of knowledge by identity its inadequacies, imperfections—inadequacies and imperfections that generate contradictions and antinomies—become evident.

What is essentially or spiritually one does appear to the physical sense-bound mind as individuated into many natural kinds, separated both from each other and from knowing individuals. Aurobindo uses the term *separative knowledge* almost in the sense of *scientific knowledge*. "Physical Science is a vast extension of (man's physical mind): it corrects the errors of the sense and pushes beyond the first limitations of the sense-mind by discovering means of bringing facts and objects not seizable by our corporeal organs into the field of objectivity; but it has the same standard or reality, the objective, the physical actuality; its test of the real is possibility of verification by positive reason and objective evidence".³⁰ Different forms of separative knowledge, empirical sciences, etc., are defended on the ground of their practical necessity. "Practical", "useful", "pragmatic" and the like terms have been repeatedly used by Aurobindo in his *instrumentalist interpretation of scientific knowledge*.³¹ Concepts and laws used by our mind to understand and explain the phenomena of the world are said to be mental constructs of practical use. The physical mind, being unaware as it is of the *inner meanings* of the phenomena to be explained, *classifies* them according to their surface features and *connects* them in terms of some abstract and verifiable *laws* only to the extent they touch upon those surface features. Scientific laws cannot seize of the inner meanings of the natural phenomena, their *how's* and *why's*. The deeper laws of the cosmic order concerning the potent ingoings of the objects and phenomena classified and connected by mental constructs elude the grasp of the scientist's understanding. Varying a famous Kantian theme Aurobindo might say of scientific law that they are *practically real* but *transcendentally enigmatic*.

From Aurobindo's theory of scientific knowledge one could reconstruct an interesting theory of natural kinds.³² To draw a distinction between "different"—at least seemingly different kinds of objects their difference drawn on the basis of the surface features of their properties as distinguished from the essential ones—"is certainly necessary for first knowledge". Isolation, distinction, classification, ordering and so on are said to be *practically* necessary for separative knowledge. Every natural kind, e.g., a diamond and a pearl, exists by its distinction from all other kinds. Each kind is distinguishable "by its own form and properties", and "has also properties and elements which are common to both and others which are common to material things in general". Natural kinds do not exist only by their "distinctions, but much more essentially by that which is common to (them); and we get back to the very basis and enduring truth of all material things only when we find that all are the same thing...one substance.. which throws up, brings out, combines...these various properties, these fixed and harmonised potentialities of its own being". Knowledge of *distinctions*, say, of a diamond and a pearl, can enable us to deal with them only practically, viz., to "fix their values, uses, varieties, make the best ordinary use and profit of them". If we can know and control "their elements and common properties" we may produce "a diamond or pearl at our pleasure". Aurobindo speaks of going farther still and mastering "that which all material things are in their essence"—of that knowledge and mastery, given which, "we may arrive even at the power of transmutation which give(s) the greatest possible control of material Nature". One would be wrong if one supposed that this "deeper knowledge" is inconsistent with and therefore cancels "the knowledge of distinctions"—of distinct kinds. Aurobindo affirms against the hasty conclusion of the absolute monist essentialist that *scientific* notions of natural kinds with their forms and properties, ultimately, on the dawn of deeper knowledge, dissolve and disappear into "one eternal and original reality". His positive thesis can be put in the following way.

There is an *essentiality* of things, a *commonality* of things, an *individuality* of things;...the essentiality transcends ...both (the commonalty and individuality), but the three together and not one by itself are *the eternal terms of existence*...All things, even while different, are yet one. *For practical purposes* plant, animal, man are different existences; yet when we look deeper we see the plant is only an animal with an insufficient evolution of self-consciousness...the animal is man in the making; man is a god in the making.³³

In brief, natural kinds are partly expressed, partly repressed, and evolving Absolute. Aurobindo's accent on evolution introduces a critical element into the static and pro-platonic essentialist's theory of natural kinds.

But his own theory itself raises certain questions. Do natural kinds because

of their commonalty shade off into one another? If they do so, how can one maintain, as Aurobindo does, that essentiality, commonalty, and individuality are the *eternal* terms of existence? Should one then take it in the sense that for the sake of *existence* the Absolute *essence* must *individuate* itself not only into *particulars* but also into *kinds* (of particulars)? If one does so, particulars, strictly speaking, cannot be unique: their commonalty stand on the way. All particulars, in that case, turn out to be *particularisations* of what accounts for their *common* affiliation to a universal kind. Details apart, this is also the Hegel-Bradley line of argument on the subject. Even the question remains, addressed more to Aurobindo than to Hegel and Bradley: "Are particularisations merely epistemic phenomena? Do they enjoy eternal or at least durable ontological status?"

Separative knowledge of the physical mind is itself a passing phenomenon, a non-permanent process. That is to say, it is not an "eternal term of existence" recognised by Aurobindo, at least not in its empirically evident form. But if we *review* it in another way, we find it as a surface phenomenon partly enveloping and yet partly developing into the "superior" or "self-evident" form of knowledge, knowledge by identity. The physical mind of *individual man* not yet conscious of its *cosmic existence* and essential affiliation to the Absolute is content with a physical sense of certitude, needs hardly anything else than *other-evident* verification, does not feel disturbed by the *absence* of its missing and elusive foundation. On the contrary, it—the seat and instrument of separative knowledge—tries to preserve its physical sense of certitude collateral to the imagist sort of knowledge by constructing and using a clear-cut logical language. Not only the names designating this or that individual but also those designating this or that kind are wrongly supposed to be fixed or rigid disregarding the flux character of the designata and forgetting the artificial ways of conferring rigidity upon the designating names. Thus a doubly dissatisfied Aurobindo turns towards a lost, luminous, and symbolic theory of language. Like Bergson, he thinks that the physical mind has a persistent disposition to fix and spatialise the particular objects and kinds which *in reality* are in flux, i.e., evolving, and also to disregard the subtle and tremendous powers of plastic, poetic, and figurative language. Since, ontologically speaking, no *nominatum*, particular object or natural kind, has any name in any language we use to designate it, it is bound to prove somewhat "logically improper" or "non-rigid". Names—the linguistic entities—"sued" for naming, or "standing" for, objects or kinds may be understood, ontologically speaking, in two different ways,—as physical marks and as *essential* symbols. *Pure* physical marks, i.e., linguistic entities not interpreted or/and understood, are hardly linguistic and self-transcendent; they stand mute and do not mean, cannot stand *for* anything other than themselves. So they know no synonym and are not translatable. But *as symbols* the physical marks may be said to have a *common essence* by virtue of which they are self-transcendent, can mean—stand *out for*—something other

than themselves, and may be used (*more or less*) intersubstitutively. The qualification intended by the expression "more or less" is the limit of "perfect intertranslatability" or "strict synonymity". In a way this is also indicative of the limit of "essentiality" underlying the "same" expressions in different language-contexts.

Doubly handicapped as we are by separative knowledge and separative language, how, Aurobindo asks, can we possibly capture and express our knowledge of objects and kinds. His problem is to speak of the unspeakable or, to put it otherwise, to express the inexpressible. At about the same time, in the second decade of this century, Aurobindo in India (1914-1919) and Wittgenstein in Europe (1913-1921) addressed themselves to, one might say, essentially similar problems of knowledge and language. At least in one respect their proffered solutions proved strikingly similar, namely, *the basis of scientific knowledge itself is not scientifically available*. The knowing self is unavailable in logical language. I have already referred to before to the Kantian undertone of these two relatable views. Also of deep interest to me are their common affirmation that the value of scientific knowledge is basically instrumental, and their common denial that scientific *theories* can picture reality of reals. Regarding their views I would like to mention two other points,—one very obvious and the other not so obvious. While Wittgenstein was deeply persuaded of the necessity of *picturesqueness* and the *clarity* of logical language, Aurobindo takes these traits as indicative of the poverty of the same. Secondly, the former's mysticism is *primarily* an admission of the limit of scientific knowledge and logic,—the latter's mysticism is positive, and indicative of the *direct* encounter with the otherwise "ineffable" reality. Wittgenstein search for logical *proper* names and *picture*-propositions was, to my mind, primarily prompted to get rid of the imperfection, imprecision and uncertainty of what Aurobindo calls separative knowledge. Called upon to bridge the gap or, to vary the metaphor, to heal the wound of separation between the knower and the known, between the symbols and the symbolised, the roles assigned to logical proper names and picture-propositions by the early Wittgenstein remained unperformed. This disappointing discovery, the failure of one-rayed reference-paradigm theory of meaning and linguistic-epistemic isomorphism, led the later Wittgenstein to, and largely accounts for, his realisation of the importance, richness, and foundational character of, ordinary language,—language as used in a specific context of social life.

Aurobindo's response to the problems posed by the separative character of logical language, as I have already briefly stated and quoted earlier, avoids the vain isomorphic path and explores a new path marked by the suggestive, indicative, symbolic, figurative and hinting powers and resources of language. He reminds me of Aristotle's arguments purported to show why in addition to and as a supplementation of logic one must study rhetoric, and also Vico's arguments purported to show how by imaginative interpreta-

tion of the mythic-symbolic languages of the ancient peoples, of the Homeric and the Vedic ages, e.g., we can recapture their lost but intended meanings. Aurobindo's philosophy of language, like Vico's, lends support to the Heidegger-Gadamer hermeneutical approach. But this is true only upto a point and not beyond that. The main point of difference lies in Aurobindo's insistence on the primacy of the foundational character of knowledge by identity. The main thrust of Aurobindo's argument in favour of symbolic language is intended to show how language instead of separating the knower from the known can help him to get closer to their basic identity. Like Vico and Herder, Aurobindo also speaks of the tri-rhythmic evolution of all major language-groups: symbolic-intuitive, logical-systematic, and phenomenological-subjective. Like other generalisations of this sort, this view of Aurobindo, though confirmed by such authors as Spengler and Sorokin, may not be entirely correct in details. But it is certainly, historically speaking, very interesting and insightful. Since I have argued this point elsewhere at length, I do not propose to go into its details here.³⁴ From Aurobindo's point of view, the subjective-phenomenological approach, initiated in the last century by thinkers like Kierkegaard and Nietzsche and evident in their ideas and language, is being carried forward now by such philosophers as Heidegger, Gadamer, Sartre, Merleau-Ponty and Paul Ricoeur. To do away with the defects of separative knowledge, Aurobindo speaks of the necessity of realising our self-consciousness, of searching the identity at bottom of the self-as-knower and the not-self-as-known. That "human language is a poor help in such a search" he is convinced, and yet he finds in it some symbols, figures, and signs which kindle "the light of the soul" enabling it to reflect on and discover "the ineffable design" underlying the subject and the object of knowledge. *Signs* are said to have the power and quality of expressing, though imperfectly, the design of objects.

It is in this context that one should try to understand Aurobindo's theory of names. Evidently influenced by the Indian view that linguistic sounds are inherently significant, he speaks of language as formation(s) of formless ultimate reality which, to him, is consciousness-*force* (as distinguished from Śāṅkara's consciousness *as such*). Language has *in* it meaning as power or force. "... (S)peech must have started from...the Guṇa of sound, some natural property of particular sounds to create under given conditions a particular kind or impression on the mind..."³⁵. In Sanskrit *śabda* means both *sound* and *word*. Word's meaning, according to *śabda-Brahmavāda*, is conveyed by the sound of its utterance or even contemplation. Word embodies meaning. Or, one might say, meaning is built in word. Language is a sort of an "aerial" and "expressive body" of knowledge.³⁶

Name in its deeper sense is *not* the word by which we *describe* the object, but the *total power, quality, character of reality* which a *form* of things embodies and which we try to sum up by a *designating sound*, a knowable name,

Nomen. *Nomen* in the sense, we might say, is *Numen*; the secret Names of the Gods are their power, quality, character of being caught up by the consciousness and made conceivable. The Infinite is nameless, *but in that namelessness all possible names*, Numens of the gods, the names and forms of all realities, are *already envisaged and prefigured*, because they are there *latent and inherent* in the All-Existence.³⁷

One possible interpretation of Aurobindo's theory of name is that, like the neo-essentialist's, it seeks to maintain a *sharp distinction* between the function of naming and that of describing. But, then, to be consistent, according to this interpretation, one is logically required to maintain, in addition, that the power, quality, character, etc. of reality which a *form* of things has in common with those of name as a form of power are *quite different* from the power, quality, character, etc. of descriptive expression. This requirement is hardly satisfiable by Aurobindo's general view of language-and-reality. Some reality, consciousness-force, is expressed in different parts of language or speech. Names do figure in descriptive expression. If one says that in the descriptive contexts names behave in a way different from what they *as such* do, one begs the whole question at stake. If it is admitted that the ways of behaviour of names as such and those of names as constituents of description are *quite different*, then, by implication, what in addition is admitted is a part of a well-known Fregean thesis, viz., the meaning of a part of an expression is determined by the context of its whole. Or, in other words, the behaviours of noun, noun-phrase, description, and other purported designating expression cannot be *essentially* different. This thesis perfectly accords with or follows from Aurobindo's general view of language-and-reality. Names as symbols and descriptions as strings of symbols behave analogously. Aurobindo would maintain that no symbol - nominal, pronominal, or descriptive—can possibly denote anything rigidly, directly and in a clear way. By its very nature denotative or designative roles of language, of every part or form of it, are bound to be more or less ambiguous. Partial reference-failure seems to be the fate of all intended referring expressions.

Deeply persuaded of this imperfect trait of our ordinary language, Aurobindo speaks of the necessity of "creating" a new language which would be "plastic", rich in suggestive powers, and "luminous". He is not opposed to the idea as such of creating logico-mathematical language but consistently highlights its practical and imperfect characters. The "fundamental truths" of Reality "are seized directly", says he, "not by intellectual understanding but by a spiritual intuition". These "large and plastic" intuitions can be somehow expressed only by a "plastic speech which does not insist too much on rigid definition or limit the wideness and subtlety of the (intuitions)." Whether one speaks of fundamental truths of metaphysics or empirical truths of science Aurobindo's critique of clear-cut logical language is *more or less* applicable: more against the former and less against the

latter. And this follows from his firm view that there is no fundamental distinction between "the transcendental" and "the empirical".

Essentially non-different from "the transcendental", "the empirical" partly expresses it and partly suppresses it. Naturally, at this stage, one might raise the question: how can the empirical sciences in and through their well-defined languages possibly express "the fundamental truths?" For the purpose of organisation and articulation of the subjects of empirical sciences, Aurobindo concedes, we need logical language as it is ordinarily understood. But for the purpose of expression of deeper intuitions of reality, he insists, we have to create a different sort of language following the symbolic-metaphoric models of the Vedas and the Upanisads. In the course of developing this argument, he rightly anticipates the objection "how the ineffable transcendental truths can be expressed?" and tries to meet it from his standpoint.

In order to express this (spiritual) experience...with any nearness a language has to be created which is at once intuitively metaphysical and *revealingly* poetic, admitting *significant and living images* as the vehicle of a close, *suggestive and vivid indication*, ---a language such as we find...in the Veda and the Upanishads. In the ordinary tongue or metaphysical thought we have...a distant indication...which may *still be of some services to our intellect*, for it...*suits our method of logical...understanding*, but if it is to be of real service, the intellect must consent to pass out of *the bounds of a finite logic* and accustom itself to *the logic of the Infinite*. On this condition alone...*it ceases to be paradoxical or futile to speak of the ineffable*: but if we insist on applying a finite logic to the Infinite...Reality will escape us and we shall grasp instead an abstract shadow, a dead form, petrified into speech or a hard incisive graph which speaks of the Reality but does not express it. Our way of knowing must be appropriate to that which is to be known; otherwise we achieve only a distant speculation, a figure of knowledge and not veritable knowledge.³⁸

It is interesting to note that Aurobindo, on the one hand, does recognise the importance and utility (though on a limited scale) of science, its method and,³⁹ on the other, repeatedly speaks of the necessity of remembering the intuitive metaphysical foundation of it. Otherwise, he is afraid, the positivist view of taking science as a self-contained or sovereign cognitive domain would cramp our understanding of the enlarging universe or, what is worse, the *scientific* metaphysician's grudging and utilitarian concession to the subjective-mental domain might end up "in the romance of the supernatural" or in the mistake of trying primarily to reduce supernormal powers to some formulas and use them for narrow practical purposes. Unless we become conscious of "a philosophic or sound systematic foundation" of science, our superficial scientific knowledge of newly discovered mental powers,

illness and their causes, we may stray "into magic white and black or into a romantic or thaumaturgic paraphernalia of occult mysticism". Aurobindo draws a distinction between true subjectivism and false subjectivism, and it is very important from his point of view.⁴⁰ While he is very much for the former because of its reflective and conscious grasp of its inner and distant reaches, he is totally opposed to the latter because of its false therapeutic pretension, concomitant somatic-egoist tendency, and its pernicious socio-political implications.⁴¹ The subjectivism that is body-based and sense-oriented makes man self-centric, keeps him confined to his *surface* being, *alienates* him from his fellow human beings, and stands on the way of knowing his *basic* identity with them and the universe as a whole. Anti-positivist and anti-rationalist ideas of Kierkegaard and Nietzsche are interpreted by Aurobindo as the beginning of the welcome subjective age in the European thought, but his attitude remained ambivalent to the movement that grew out of those ideas, especially when the same got mixed up with the ideas of Husserl and Freud. If he were alive, I suppose, he would not have approved of the "neat" transcendental reductive programme of the former, or the primacy of the suppressed sexual-somatic impulse as suggested by the latter. The transcendental reductive programme offends "the logic of the Infinite": its proclaimed neatness is inconsistent with the evolving diversity of reality. But, I think, he would substantially endorse Husserl's diagnosis of the crisis of the modern European science, viz., its lack of awareness of its essential human foundation. By the same token, it might be pointed out that Freud's account of the sexual-somatic impulse failed to take note of its deeper sustaining power,—the power not of somatic but spiritual consciousness. The bottomlessness of the existential-phenomenological theory of the individual being and freedom is also, I find, close to Aurobindo's view *to a certain extent*. However, the ontology of the individual's boundless freedom is unacceptable to the integral monist: for the latter the bottomlessness of the individual being's freedom is ontologically grounded in the underlying universality of his being (of which he cannot be conscious at any particular point of time). *Dasein* to Aurobindo is the simple fact that to the human individual even his own being cannot be presented as a *totum simul*: he has to grasp it, realise it, progressively, through evolution,—evolution both of his self and species.

The same argument, I have pointed out, Aurobindo uses also in his theory of knowledge. Knowledge is knowledge of his—his individuality's—identity with *whatever* is,—the Universe marked by diversity. "(T)he true knowledge and description must be left to the language of the mystic and the figures, at once more vivid and more recondite, of a direct and concrete experience (of the Universal Reality)".⁴² "This language of the mystic" has nothing mysterious in it and must not be associated with any sort of pseudo-occultism. It is the mother language both of the logical language meant for the separative knowledge of science and of the jargon-loaded

"systematic" language of metaphysics. The intelligibility and the communication powers of these two types of language are parasitical upon the plasticity, richness, and suggestive powers of the mother language. And yet, one must remember, Aurobindo speaks of *no* universal language which could possibly express the richness and diversity of the Universal Reality. In other words, one might say, the veritable knowledge of reality always exceeds the bounds of language however promising might appear its deep structure. In a sense language is always, even in its richest form, tied to a dualistic ontology; or, to put it differently, a dualistic ontology is built into language. The said tie-up might be tenuous and the inherent dualism weak; but, in any case, for the purpose of expressing what Aurobindo calls knowledge by identity every language, however intuitive or revealingly poetic it might be, fails at one stage or other. One has to admit, then, the linguistic expression of the ineffable can hardly be more than glimpses of what reality is. It is primarily a matter of experience or realisation and not of linguistic expression or communication.

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Bolzano and Frege: A Note on Ontology

THE OBJECTIVES of this paper are very modest and limited. It is well known that Frege was influenced by Bolzano in his ontology and semantics, but this aspect of his thought has not been adequately discussed. In this survey paper, I will try to show that Bolzano's analysis of proposition had clarified certain ontological and semantic issues which were subsequently developed, refined and used by Frege in his philosophy of mathematics. I will also touch upon the question whether Frege's ontology is realist or nominalist. In the process I will very briefly refer to the contrary views of Quine and Strawson on the matter.

The concept of thought has often been mixed up with that of the process of thinking and doubt expressed not only regarding the possibility of thought being true on its own but also regarding the very existence of thought itself. The words 'process' and 'product' are so closely associated in the human mind that this has wrongly led some philosophers to believe that a thought is invariably affiliated to someone's psycho-biographical history. One need not deny either that a thought may be traced to someone's thinking or that it may be apprehended by others. But that is a contingency on which the essence of thought, i.e. being true or false, does not lie. Besides being true or false, thought has properties indicating its kinship with, and difference from, proposition. The very fact that a thought can be apprehended by persons other than the one to whose psycho-biography it is attributed suggests, among other things, that there is nothing very revealing in tracing a thought to its supposed origin in some one's mental thought process. Further, the very possibility that a thought may be apprehended by different persons and also the same persons at different times opens up another way of looking at the so-called point of its origin. One could not think a 'thing' at all, still less share it with others and recognise it over time, unless the necessary logical conditions were satisfied.

The concepts of objective thought, possible cognition, truths in themselves, mental propositions, propositions in themselves and the like have been repeatedly discussed, and in different forms, in the history of logical philosophy. Most of these attempts are marked by an intention to free logic from

the vagaries of the figurative association of psychology. Bolzano refers¹ to the ancient Greek philosophers who already had the concept of a truth in itself, which presupposes that of a proposition in itself. Leibniz's expression *cogitatio possibilis* has been interpreted in this way: a proposition is a 'possibility of a thought' or 'something that *can* be thought or *can* constitute the content of a thought'. But thinkability, though a property of proposition, does not form a part of it and, therefore, Bolzano argues², does not belong to its definition. Aristotle's explications of the concept of proposition (*De interpr.*, 17d3, and *Anal Prior*, 24a16) have also been rejected by him on the ground that the former does not indicate all the components of the definiendum and the latter does indicate components which are not covered by the definiendum. Most of the classical definitions of propositions are said to be vitiated by what Bolzano calls fallacy of classification by which he means exclusion or inclusion of components in the concept to be defined. To assert, as Aristotle does, that 'A proposition is what is either true or false' is to give a narrow definition of the concept and provide only an understanding about the sense of it, i.e., proposing or positing does not convey the full import of proposition. While in the course of defining a premise as a proposition, and asserting that 'A premise is a sentence affirming or denying one thing or another' Aristotle introduces the concepts of affirmation and denial, neither of which, being judgmental in character, is recognised by Bolzano as a component of the concept to be defined.

Coming to the positive part of his own view Bolzano writes: '*By proposition in itself* I mean any assertion that something is or is not the case, regardless whether or not somebody has put it into words, and regardless even whether or not it has been thought.'³ He gives an example of what he precisely means by the concept of *proposition in itself* (henceforward *proposition*): 'God, being omniscient, is cognizant not only of all true but also all false propositions; not only of those which are held true by created beings or those of which such a being merely had a notion, but also of those propositions which nobody holds to be true or even conceives of or will ever conceive of'. First, proposition is *not* something proposed or posited by somebody existent. It does not presuppose the existence of a being that does the proposing. Second, it should not be confounded with an *idea* or a *belief* or a *judgment* which is present in the consciousness of a thinking being (other than God). Only in God's consciousness does every proposition occur. Third, being (existence or reality) should not be ascribed to a proposition. Only the asserted proposition, i.e., the *thought* of a proposition, and the *judgment* which has a given proposition as its content, may be said to have their existence in the mind of the concerned being. 'It is...absurd to say that a proposition has eternal being as it is to say that it originated at a certain moment and ceased at another'. Finally, proposition may, contain the concept of a thought or judgment as one of its parts, but in itself it is neither a thought nor a judgment.

Collateral to the concept of proposition (in itself) Bolzano introduces the concept of truth in itself and calls it the 'concrete objective sense' of truth, and distinguishes it from several other senses of 'truth' and 'true'.⁴ It is not a property of proposition (in itself) which he calls the 'abstract objective sense'. Nor is it to be confused with the 'subjective sense of "true"' often associated with the expressions like 'asserted proposition' and 'true-judgment'. The 'concrete objective sense' of truth has also to be distinguished from the 'transferred sense' of 'true' that performs the functions of words like 'real' and 'genuine' in the propositions of the form 'This is the true God'. By a truth in itself, Bolzano means any proposition which states something as it is, ascribes to the referred-to-object the properties it really has, and he leaves it *undetermined* whether or not this proposition has in fact been thought or spoken of by anybody. Certain 'theorems' follow from this concept. First, truths in themselves are a kind of proposition (in itself). Second, unlike *recognised* or *thought* truths in man's mind they do not have any actual existence, i.e., spatio-temporal address or identity. Third, though actual determination (by someone's thought or otherwise) is not a part of the definition of the concept of truth in itself, God being omniscient cannot be logically deemed to be without representation of any truth whatsoever. Fourth, representation of truth in itself or determination of it by God's consciousness does not, however, in any way, affect its character. Neither man nor God is free to recognise truth in itself in a way which is violative of or contrary to its own character. Finally, when it is said that a truth states something as it really is, this phrase is to be taken in a figurative sense. For all truths do not state something that really is (i.e., has existence). For example, 'the proposition "A truth is not something that exists" does certainly not state something that exists, and yet it is a truth.'

Truth in itself, according to Bolzano, is not a strange concept. It is referred to by as divergent thinkers as the Epicurean and the Stoic, Thomas Aquinas and Leibniz. Truth is the antithesis of falsity and not of error and as such must be understood as a purely logical concept free from its psychological and epistemological associations. It is pre-reflectively used even by the common man when, for example, he speaks of 'truth known or unknown'. This shows that it occupies a central position in any logical inquiry.

Bolzano has proposed a definition of truth (of proposition). What is to be understood by a proposition is 'not a string of words, but merely the sense (*sinn*) which a certain string of words can express'. A true proposition has a certain object with which it deals (subject) and also a certain something which is stated about this object (the predicate). In other words, a truth is a proposition that states something about its subject, something that belongs to this subject. This assertion can be regarded as a definition provided three conditions are satisfied: (a) it is reversible; (b) the definiendum is not in the definiens; and (c) it states correctly what we think, 'whenever we think the concept of truth'. Bolzano claims that his definition of truth satisfies all

these conditions and refers to Aristotle, besides a number of other philosophers, who used the expressions, 'This belongs to that' and 'this can in truth be stated of that' interchangeably (*Anal Prior*, 49ab). The definiendum, *truth*, is not contained in the definiens, *proposition*, *object*, *stating*, *belonging*, and *something*. Further, Bolzano feels sure that his definition of the concept of truth corresponds exactly to our thought of the concept of truth.

Obviously, Bolzano's is a realistic theory of truth which highlights the role of genuine referring expression in determining the truth-value of proposition. He defends his view of propositional truth undetermined and unaffected by human thought or cognition in terms of the objective relations obtained between referring ideas and predicative ideas. In the process he criticises nominalists like Hobbes who maintain that truth does not reside in *things* but only in *words* (*De Corpore*, I, 3, no.7). While he recognises the important role of language in which proposition is expressed, he rejects the thesis that all first truths are arbitrary and owe their existence to the *names* given to things. The nominalist confines his attention only to things and signs of things but not to ideas of them. 'Idea' too has a special (realistic) connotation for Bolzano. He speaks of the concept of an idea in itself by which he means 'anything that can be part of a proposition in itself' or 'objective idea' as distinguished from subjective idea having a mental existence and resulting from sensory stimulus. It constitutes the immediate matter (stoff) of subjective idea, does not require a subject but subsists (*bestehen*). The theoretical objectives of this formulation are obviously more than one: (a) restrict the scope or say of stimulus-meaning, (b) to keep also the process of entification restricted to its minimal extent, and (c) to take care of the different contingencies of indirect reference, opaque reference, and reference failure and the consequential truth-value gap, or, until sorted out, its appearance.

The import of (a) is clearly anti-nominalist and that of (b) inconsistent with a radical form of realism. It seems that (c) is purported to meet the criticisms of the nominalist and the ontological relativist. In effect, Bolzano's ontology which in some important respects anticipates Frege's is an ingenious attempt to reconcile the flexibility of realism with the austerity of empiricism.

Bolzano's ontology has been schematised by Grossman⁶ in this way:

1. MENTAL STATES	2. OBJECTS (1)	3. SENSES
(a) Individual Ideas	(a) Individual Things	(a) Individual Concepts
(b) General Ideas	(b) Properties	(b) General Concepts
(c) Thoughts		(c) Propositions

Unfortunately, *judgments* do not find a place in this schema. I think these should be shown under 1 as (d). Bolzano's own arguments on the matter

are elaborate and clear (Sec. 34 and 29 off). Of the three kinds of entities recognised by Bolzano (1) may be said to be purely subjective, (2) purely objective, and (3) quasi-subjective or quasi-objective, depending on the concerned philosopher's predilection, for (3) occupies an intermediate ontological position between (1) and (2). Evidently, he is not persuaded of the rationality of the claim that all the entities of the universe can be neatly classified under two heads, subjective and objective, and therefore, feels logically obliged to recognise quasi-objective entities like concepts and propositions. Analysis of thought and judgment makes this point clear.

No proposition is real in itself or exists by itself. Propositions are merely the matter (*stoff*) apprehended by the rational man in his thoughts and judgments. Most of the propositions are complex, consisting of ideas. If all the three parts (i.e., ideas) of a proposition are simple, then and only then can that proposition be regarded as simple. It is very difficult to give an example of a simple proposition. Even one-word propositions like the Latin *sum*, which appear as simple propositions, are on scrutiny found to be complex: *sum* contains the concept of existence and the idea 'I' as subject.

All propositions have three parts, a subject idea, the concept of having, and a predicate idea. If the propositional whole or complex, as expressed, does not disclose each one of its parts, that is because of its linguistic form. In the proposition 'Gold is yellow', 'Gold' is the object, 'yellow' an attribute claimed for the object, and 'is' indicative of the concept of having. The sum of these three ideas (a) *object idea*, *subject idea*, or *basis*, (b) *attribute* or *predicate idea*, (c) *connector* or *copula* constitute the *content* of a proposition. Bolzano opposes those logicians who think that copula is a part of the *form* of a proposition and asserts that it is a part of its *content*. When one thinks that gold is yellow, there occurs a thought in one's mind, and in thinking that thought, one thinks of the proposition that gold is yellow, and in thinking so one 'relates' oneself directly with a concept (individual or general) and only indirectly, through the concept, with an object (or a class of objects).

Like thought, judgment is a mental appearance of proposition in itself the proposition is the content of the judgment. Unlike propositions, judgments 'have reality in the mind of the being that thinks them'. A judgment is a whole of parts—parts being subjective ideas, and corresponding to every subjective idea in a judgment there is an objective idea in the concerned content-proposition.

A 'peculiar relation' obtains between the subjective ideas in making a judgment, having them as its constituents, possible. Partly, the judgmental whole is constituted by the will of the person who makes it; but its constitution 'follows a certain law of necessity' as well, and that manifests itself in the mutual influence of the constituent ideas present in the mind of the person making the judgment.⁷ It appears from Bolzano's explications of concepts, ideas, propositions, thoughts, judgments and their constituents that the forms of their combination are objectively grounded, although a

person's volition may introduce an element of indefiniteness in the identities of the ontological entities of the category (1), i.e., *subjective Vorstellungen*.

The object to which an idea refers is distinguished by Bolzano not only from what the latter is based on. Whenever a mental idea has one, none, or several objects, the corresponding idea in itself must be deemed to have one, none or several objects. The objects of an idea are a *representation* of something which may or may not exist. If the referred to idea is something which could be said to be existent like Socrates, Plato and others, then the referring idea, 'Greek philosopher', is easily understandable. It is, however, not so easy to distinguish between an objective idea or sense and its object (assuming it has one) if the object itself does not exist. The objective idea 'proposition', e.g., refers to the objects like the Pythagorean Theorem and the theorem of the parallelogram of forces, which, as propositions in themselves and unlike Socrates and Plato, do not exist. Thirdly, corresponding to the subjective ideas 'nothing', '-1', etc., according to Bolzano, there must be objective ideas, but it would be 'absurd' to think of objects to which these ideas refer. 'The greatest temptation to regard an objective idea as one with its objects occurs when a subjective idea has only one object which does not exist, as for example, the idea "supreme moral law"'⁸. The object referred to in this case is obviously a proposition.

The concept of objective idea is used by Bolzano to give a satisfactory (or what seems satisfactory to him) interpretation of those sentences like 'Nothing is better than this medicine' in which the subject term does not refer to an object but to something else. He analyses the sentences of the form 'Nothing has property b' as 'The idea of an object which has property b does not have a referent'.⁹ The purported reference of the subject term in the sentence 'Golden mountain is an imaginary object' is also not there as a physical object. Since both 'nothing' and 'golden mountain' represent some subjective ideas, there must also be objective ideas which correspond to them, but neither of them can be said to have an objective reference. However, there is a difference between 'nothing' and 'golden mountain'. In the sentence, 'Golden mountain is an imaginary object', 'golden mountain' as subject has been used as an idea of idea and hence referring, and *not* just as an idea and therefore non-referring. Another line of analysis suggested by Bolzano to prove that suspected subject ideas of true proposition do have reference is this. Categorical propositions with subject ideas of doubtful referential character should be understood as a proposition of conditional form. For example, the proposition with 'golden mountain' as its subject may be suitably reformulated like this: 'If a golden mountain were there, it would be an imaginary object.'¹⁰ The somewhat straitjacket analysis of Bolzano follows from one of his basic views regarding the nature of *true* propositions, viz., 'All *true* propositions must have an object with which they deal...must contain an idea which refers to this object, so that the so-called subject idea (or basis) must in all true propositions be proper referring

idea'.¹¹ This is a part of his larger thesis, viz., every, even the simplest proposition, is composed of certain parts and these parts are not there only in the verbal or written expression of subject, predicate and copula, but are already contained in the proposition in itself. In other words, corresponding to the subjective ideas of mental proposition, he is committed to maintain that there are objective ideas. Objective ideas (*Vorstellungen*) are obviously unowned by anybody and, therefore, are inconsistent to common usage. Bolzano reserves and makes use of a more suitable expression, 'concept' (*Begriff*) to highlight its contrast from 'intuitions' (*Anschaungen*) in the context of a discussion of conceptual and empirical propositions. By *concepts* he means the ideas which are not intuitions and do not contain any intuition as constituents.

To say of something that an object has it, it must be a certain attribute of that object. Every true proposition, then, must have a proper referring idea (i.e., subject), a proper attributive idea (i.e., predicate) and it is presupposed that the copula is the concept of (performs the role of) having. In negative propositions, the concept of negation never applies to the copula, but to the predicate part. Every verb is believed to contain the very 'to have' as a part of it or is identical with it. According to Bolzano, 'A does' means exactly the same as 'A is doing'. A proposition of the form 'A is' (an existential proposition) means the same thing as 'A has existence'. 'God is' (affirmative existential proposition) is to be understood as 'God has existence'. Negative existential propositions are to be understood (in their general form) as 'A-has-no-existence' or 'A has the attribute of non-being'. The proposition of the form 'A is B' has the sense indicated by the expression 'A has b', where b is the *abstractum* (or attributive idea) which belongs to the *concretum* B. In this form ('A is B') of propositions, 'is' lacks in existential import, for a proposition of this form (e.g. 'The concept of a triangle is complex') can be true even if the object A (in this case 'The concept of a triangle') does not exist.

The true copula is formed by the *pure* concept of having and, according to Bolzano, does not admit of time determination. That is, true copula is tenseless. He is perceptive enough to observe that "We must not conclude that since language connects the concept of having with time determinations, there is an essential connection between them. When one says, 'Every truth has an object with which it deals' one speaks of objects which are *not* time-determined and yet gives the impression of time-determination through the verb 'to have'. Time determinations belong essentially to the subject idea of a proposition. What a proposition of the form, 'the object A—has at time t—the attribute b' really means should be expressed more correctly and clearly in the form: 'The object A at time t-has-(the attribute) b'. For the attribute b is *not* claimed at time to be true of the object A: but the attribute is claimed to be true of the object A at time t.¹² Certainly, the time determined distinctions between 'the object A' and 'the object A at time t' is very important. The copula of a proposition is, then, to be taken to be a part

of its content and not of the form. Every proposition is true or false, and remains so irrespective of the place and time of its expression in the language, spoken or written. Closely allied to the concept of proposition is that of cognition or knowledge (*Erkenntnis*). It means any judgment that contains a *true* proposition. Each cognition is a judgment; but the converse does not hold, for there are incorrect judgments.

Bolzano draws distinction between the *content* and the *extension* of an idea. By the content of an idea, he means the *sum* of which the idea consists, but not *how* these parts are connected. Thus, an idea is not completely determined by its content, for the parts of the contents may be differently combined. Simple ideas and their content are one and the same thing. The *range* or *extension* of an idea is constituted by the objects to which it refers. Non-referring ideas have no extension. Ideas are required to have some particular characteristic(s) by virtue of which they can represent (the referred to) objects constituting their *range* or *extension*. For the complete determination of *extension* of an idea, not only the number of the objects to which it refers but also their identity and the possible modes of combination, have to be established. The number of the objects indicates the *scope of extension*. When the number of the referred-to objects is infinite, the scope of referring ideas, e.g., the ideas 'line' and 'angle', cannot be determined, at least not directly. Only indirectly in relation to the determinable extensions of other ideas can their scope of extension be determined in limited respects. For example, the extension of the idea A can be determined by saying that it is a part of the extension B, or vice versa.

Much importance has been attached to the ideas which are both *simple* and *singular*, singular in extension and simple as regards content. An idea with the smallest extension, i.e., one that represents only one object, is called singular. Holding a rose before my nose when I say 'This (what I just now smell) is a pleasant fragrance', 'this (what I just now smell)' designates an idea which is not only singular but also simple, i.e., not composed of parts. If all the three parts of a proposition are simple, then it is called a simple proposition. The concept designated by the expression 'to have' is by its very nature simple. Bolzano, somewhat like Wittgenstein, confesses that he finds very difficult to provide even a single example of simple proposition and 'this is due to the fact that it is very difficult to persuade oneself of the simplicity of an idea'.¹³ The difficulties associated with 'ostensive definition' and the identity of the 'simple' evidently disturbed Bolzano. 'This red' and 'that red' indicate two different and unique ideas, referring to two distinct objects, notwithstanding the fact that the word 'red' occurs in both the expressions. 'This red' and 'that red' are two distinct and unique object indicators and, therefore, to be distinguished from judgments 'this is red' and 'that is red' when 'red' as a predicative idea is being applied once to 'this' (object) and then to 'that' (object). In the judgments '*this* man is a scholar', 'the man was immaculate' and '*some* men are vile' the true subject ideas are '*this*

man' 'the man' and 'some men' (*not* 'man') and occur in their complete extension.

Whether a particular expression is uniquely referring, i.e., referring to only one object, cannot be satisfactorily determined outside the functional scope of a language (*Wortsprache*). The referent of a simple and singular idea is sensible (intuition in the Kantian sense) and its identity can be regarded to have undergone change if it generates or causes any sensible change in the mind of the man who senses it. The objective referent of intuition, being unique in its nature, is *not* communicable. Still, when we claim to have communicated our intuitions to some one else and thoughtful, what we actually mean is that we have acquainted him with some *attributes* of the concerned intuition. If the object of intuition is an enduring one, capable of causing a number of intuitions over a period of time in our body-mind complex, it is easy to communicate (about) it. But, then, Bolzano calls such an object a *proper name* designating *mixed* ideas of the form 'the object that is the cause of my once having had such and such intuitions'. Proper names designate not only objects but also persons, who are living as well as who are not. 'Socrates' is a proper name because his identity as one 'who lived so many centuries ago in Greece and who was called Socrates', is recurrently representable to our senses and, thus, remains abiding. Proper names are not generally used for the purpose of designating objects directly. 'Most of them are designated by the description of a relation that holds only of them, a relation in which they stand to certain other objects that we already know.'¹⁴ Space and time relations, and the words like 'now', 'recently', 'here', 'there', etc., are evidently most useful for this purpose. Indeterminacy is associated even with the use of such words as 'here' and 'now'. It is true that nobody knows what I mean when I point to the rose bush in front of me and say 'this thing...', you could not know whether I meant the whole rose bush, or only this rose, or this leaf, or what.

By the extension or the range of a proposition Bolzano means that characteristic of the referring idea by virtue of which the concerned proposition deals with these rather than some other objects. The extension of a proposition is identical with the extension of its subject. However, one must not confuse the extension of a proposition with its scope which is merely the number of objects with which it deals. The predicate idea or the attributive expression is *not* to be taken in its full extension. When one says, e.g., 'Caius has intelligence', one does *not* specify all the kinds of intelligence that one could possibly think of, viz., crude, modest, developed, highly developed, etc. The proposition 'A has b' is to be interpreted in this way: every object under A has one of the attributes under b; and if there are several of the latter, it remains undetermined which of them belong to every A. Bolzano refers to Aristotle's view (*De Interpr.* 17b15 *Anal Prior.*, 43b20) that no affirmative judgment can be true if its predicate is general, i.e. of the form 'all men are living beings'. He rejects its interpretation as 'all men are some

living beings', though it is true in a sense, for this is not the intended sense of the proposition. 'All men' is understood to be distributive, i.e., as 'every man' or 'man as such'. But to be true, the expression 'all men' is to be taken as collective, 'the class of all men', 'some living beings' is to be taken also as a class concept having for its objects or elements different sorts of living beings like birds, reptiles, or fish, and one does not know that extension one ought to assign to the general idea or the class concept which takes the place of the predicate. He interprets the proposition as 'every man has animation', taking only the partial extension of the attributive idea occupying the predicate position.

Bolzano repeatedly examines the question of the correctness or otherwise of idea. He points out that the words 'true' and 'false' should be reserved for propositions and should not be raised in the context of ideas. He refers to Hollman's and Reusch's *picture theory of ideas*. To be a picture of an object, the picture itself need not be necessarily an idea; it could be another object as well. An object could be the picture of another if the two are sufficiently similar so that for certain purposes and on certain occasions one may find it more suitable to examine the first rather than the second. If this is the case, then one and the same object may be said to represent different pictures depending on the purposes and occasions under considerations. However, this is not how, especially with reference to object, that people talk about a picture. The object is referred to for determining the correctness or otherwise of ideas in someone's mind: i.e., mental ideas are best suitable to be pictures. But there are ideas which have no 'corresponding' objects and, therefore, cannot be regarded as pictures at all.¹⁵ The correspondence between an idea and its object is *not* some kind of similarity in the composition of the two. It is wrong to suppose that the parts of an idea must be ideas of the parts of its objects. The resulting assumption that a completely simple object can be represented or pictured only by a simple idea is equally wrong. For, first, there are ideas without objects at all, e.g., the idea 'nothing', 'round square', etc. Second, there are ideas like 'a hand without mountains' and 'a book without engravings' in which cases the constituent ideas 'mountains', 'engravings' do not indicate parts that the object has but those that it lacks. Finally, there are objects which cannot be said to have parts at all, while their idea is complex. For example, mental being is a simple object but its concept is composed of several parts.

Frege's ontology can profitably be understood against the backdrop of Bolzano's. It is often said that the sense-reference distinction drawn by Frege is confined to names and does not apply to concept words. Questions have been raised whether concept words have reference or they just express concepts. Conflicting views have been expressed on the question by Peter Geach, Michael Dummett and William Marshall.¹⁶ Frege characterises concepts and concept-words as unsaturated and this in turn obliges him to introduce the concepts of value-ranges and concept-correlates. Gustav Bergmann has argued that the origin of these problems is the hidden nominalism of Frege

and E.D. Klemke tries to show that Frege is clearly a realist, for Fregean concepts are entities and do have reference.¹⁷

Frege attaches much significance to what he calls *conceptual content* (*Begrifflicher Inhalt*). He draws a line of distinction between the contents which can and the contents which cannot be judged about. It reminds one of Bolzano's distinction between contents of concepts and contents of proposition. He draws a line of distinction between judgments and mere conjunction of concepts. This reminds one of Bolzano's distinction between judgments and mere contents of propositions. Frege thinks that two sentences may have identical conceptual content, while they may have different senses. The conceptual content of 'Russell admires Frege' and 'Frege is admired by Russell' is identical but their senses are different.¹⁸ This reminds one of Bolzano's view that two propositions cannot be identical, even if they have identical content.

It seems that at the time of writing *Begriffsschrift* (1879), Frege was only vaguely aware of a general sense-reference distinction which he clearly formulated later on (1892) in 'On Sense and Reference'. In *Begriffsschrift* Frege's main concern is the notion of conceptual content of a sentence. Since conceptual contents consist of concepts rather than objects(1), his main analysis was concerned with concepts expressed in sentence and not objects(1) referred to by expressions. Neither in Bolzano's nor in Frege's ontology (1879) is there any discussion of objects(1) as reference of, and corresponding to, whole sentences expressing propositions and thoughts. It is only in 'On Sense and Reference' that Frege is found to have conceived of sentences as names that refer to True and False and express something (i.e. sense). Frege advances beyond Bolzano in the respect of introducing second-level concepts. He replaces Bolzano's subject-predicate analysis by a function-argument analysis of proposition. In fairness to Bolzano, it should be recalled that this approach was, at least partially, anticipated by his view that conceptual contents are *sums* of concepts (see pp. 219 and 222) irrespective of the modes the concepts are combined in. To take his own example: the content of the two different concepts 'a learned son of an ignorant father' and 'an ignorant son of a learned father' is the same.¹⁹ It means that a concept is not completely determined by its content. And it further means that in respect of conceptual content, the subject and predicate places of sentences are of no special or peculiar significance. The implicit denial of asymmetry between subject and predicate positions makes this view somewhat vulnerable to the charge that it is crypto-nominalist. However, it appears that after the publication of *Begriffsschrift*, Frege clearly realized the necessity of drawing a definite distinction between concepts and objects (2) or concepts that are predicable; otherwise the very concept of proposition remains vague.

Frege's main concern was mathematical propositions, including the logic of their formation and transformation. In the process, the philosophy

of mathematics he developed has two main aspects—general semantics (both of ordinary language and also logico-mathematical language) and ontology. In fact, his semantical doctrines are steeped in ontology. Like Bolzano's, Frege's ontology is the upshot of his logical investigations into the forms and contents of different types of propositions. None of them was an ontologist in the Wolffian sense, i.e., a general metaphysician, engaged in enumerating and interpreting the first principles. As an ontologist, however, one is obliged to list completely one's categories of entities, and even if one is not ordinarily expected to list exhaustively all the entities under each category, certainly the allocability of each and every logically recognized entity to one or the other category is a basic test of the soundness of the concerned ontology. Doubts and disputes arise when, for instance, some entities are found homeless, i.e., not allocated to any category or found to be inhabitants (under the same name) of more than one home, i.e., allocated to two or more categories. Controversy arises also over the questions of number and rationality of the kinds of entities. The realists like Bolzano and Frege maintain that we must recognize the entities which we are *logically obliged* to recognize and they find no special virtue in observing ontological austerity for the sake of austerity. The nominalists like Quine and Goodman complain that the realists have carried their 'logical obligation' too far and without good reasons. Apparently, by *logic* Frege and Quine do not mean the same thing. However, we know that logic without ontology is mere calculus. It is on the question of the interpretation of the latter that the difference between the semantics and ontology of the realist and those of the nominalist becomes clear.

What do we *mean* when, for instance, we say $12 = 7+5$? Are 12 and $7+5$ *identical* or different? Frege says that the *range* of 12 and that of $7+5$ are identical and that, even then, there is some difference between the two. And the difference becomes somewhat obvious when we reflect on $12 = 12$ and $12 = 7+5$ and feel like saying $12 = 7+5$ is *not* $12 = 12$. In Frege's language, 12 and $7+5$ are identical in respect of their range and differ in their *sense*. Questions naturally arise as to what sort of an entity *range* is? What sort of entity is *sense*? What are their status—subjective or objective—same or different? Besides, if it is admitted that 12 and $7+5$ are identical in one respect and different in another, how then is the sign ' $=$ ' to be semantically interpreted? Again when, for instance, we say $x = 4x = x(x-4)$, what do we mean by and what sort of entities are $x-2x$ and $x(x-2)$? Are we asserting identity between them, or equality of them? Most mathematicians would say that these two entities are functions, not simply numbers. What sorts of entities are *functions* and *numbers*?

The ontological implications of Frege's philosophy of mathematics are to be understood *via* his analysis of mathematical propositions. What are the permissible ways of manipulating the symbols or expressions of a propositions? Why are the other ways of manipulation not permissible? These and other

related questions, rightly answered, show the close relation between the ontological and the semantic implications of Frege's philosophy of mathematics. Though his semantical theory was initially propounded within the limited context of a logical analysis of mathematical propositions, it had the ingredients of a general semantical theory in it which were successfully exploited by others later on. Since both his semantics and ontology were developed not in an abstract manner but through a step-by-step analysis of proposition, quantification and proof, his conclusions have been found to be very precise, concrete and useful. The close relation between Frege's ontology and semantics and how they are deeply embedded in propositional analysis are clearly evident from his two classic papers, "On Sense and Reference" and "On Concept and Object", both published in the year 1892. His two basic categories of being are *function* and *Object*. Objects are existents, while functions are objective but not existents. Concepts fall under functions; concept-correlates and function-correlates both fall under objects. Extensions (classes, value-ranges) also fall under objects and are said to be existents. Perhaps the strangest things found under the objects are truth-values. In spite of Frege's claim that his ontology is austere and absolutely necessary to make logic and mathematics intelligible, the beings posited by him have been criticized by Ogden and Richards as mere projections of language, 'phantoms due to the refractive power of the linguistic medium'.

Frege's ontology may be schematized in the following ways :²⁰

- | | |
|--|--|
| 1. OBJECTS (existents) | 2. FUNCTIONS (objective but not objects and not (existents)) |
| (a) Individuals | (a) Mathematical Functions |
| (b) Numbers | (b) Characters (Properties) |
| (c) Extensions (classes, value-ranges) | (i) Concepts |
| (d) Thoughts | (ii) Relations |
| (e) Senses | |
| (f) Concept-correlates | |
| (g) Truth-values | |

This is how Klemke has schematized Frege's ontology following Bergmann's pro-nominalistic interpretation. It is to be noted here that function-correlates do not figure under objects in this scheme. The most important point to be noted is: characters are functions and *not* existent and therefore do not figure under I, i.e., objects. This thesis seems to be Bergmann's main reason for characterising Frege's ontology as hidden nominalism.

According to his own pro-realistic interpretation of Frege's ontology, Klemke thinks that the basic line of distinction is to be drawn between the entities which are references and which are not. His schema is given below :²¹

1. REFERENCES

- A. Objects
 - (a) Individuals
 - (b) Numbers
 - (c) Truth-Values
 - (d) Extensions (?)
 - (e) Concept-correlates
- B. Functions
 - (a) Mathematical Functions
 - (b) Characters
 - (i) Concepts
 - (ii) Properties

2. NON-REFERENCES

- A. Senses
- B. Thoughts

It is to be noted here that Klemke, as opposed to Bergmann, has put characters under I, i.e., References. Because of their unsaturation feature and grammatical predicate position, their ontological status is not inferior to, or different from, that of individuals, numbers and so forth. However, Howard Jackson²² has argued to show that Klemke's schema is incorrect because the sense of an expression is an object and that sense as an object is to be shown under the category of references. Klemke²³ refuses to accept this suggestion on the ground that Frege himself has pointed out in 'The Thought' that thoughts and sense are entities but neither functions nor objects.

Frege's ontology undoubtedly lends itself to alternative, not necessarily conflicting, interpretations—nominalistic and realistic. One might even say, as Klemke at times does, that there are Platonic elements in his thought. Dummett²⁴ considers him the father of 'linguistic philosophy' in the special sense that Frege was the first philosopher to realize that the key to the correct analysis of concepts consists in the study of the meanings of their expression and that he anticipated Wittgenstein's thesis that 'all philosophy is critique of language'. According to Dummett, Frege is a consistent realist and his logical analysis of language in general, and of mathematical language in particular, proves the position convincingly. The study of linguistic expressions, symbolic and ordinary, discloses various categories of ontological entities to which the said expressions are variously committed or related. The interpreters are free to classify those ontological entities according to their understanding and objective. But it seems clear from Frege's own writings that he recognizes three realms of reality (categories of reals, i.e., ontological entities): (1) the external world, the realm of references, about which we speak; (2) the realm of the mental; and (3) the realm of the sense. Both (2) and (3) in different ways belong to (1).

Frege calls a thought something for which the question of truth and falsity arises. Immaterial in itself, the thought is clothed in the material garment of a sentence through which it becomes comprehensible to us. A sentence

expresses a thought. Truth is affirmed not only of thought but also of pictures, ideas and statements. Truth is, then, claimed of the things which are sensible as well as which are not. Can a picture itself as a sensible thing be true without being true about something else, representing that something? Why cannot a canvas itself (on which a picture can be drawn) be true? Behind a picture there can be, but behind a canvas there cannot be, an intention. Another way of answering the question is: a picture represents something else, but a canvas does not represent anything. An idea is said to be true (not in itself) but only with respect to an intention that it should correspond to something. From this one might conclude that truth consists in correspondence of a picture with what it depicts, and that correspondence is a relation. Frege rejects this conclusion. For, first, 'true' is not a relation-word and when of a picture one says that it is true we do not know to what it corresponds and, therefore, what to look at (or contemplate). If one does not know that a picture is intended to represent the Taj Mahal (or Frege's own example, the Cologne Cathedral) then one does not know with what to compare the picture to determine its truth. Second, a correspondence can be called perfect if what corresponds and what it corresponds to are not distinct things at all. But, as we know, an idea or a thought to be true must be different from something real to which it is claimed to correspond. Complete correspondence or complete truth is an impossibility. To talk, as philosophers like Tarski and Popper do, of incomplete truth or of degrees of truth makes no sense to Frege. 'Truth', says he, 'cannot tolerate a more or less'. In a bid to salvage the correspondence theory, one may talk of correspondence in a limited sense, in respect of some or other (for example, structure) feature of corresponding things. Little analysis is necessary to show that the amended version of the theory is equally vulnerable to these questions and difficulties. It is no use going around in a circle. 'The content of the word "true" is unique and undefinable', says Frege.²⁵

Since thought, unless expressed in a sentence, cannot be communicated and meaningfully discussed in relation to the question of truth, any worthwhile analysis of thought can hardly be satisfactory without an insight into the nature and import of different types of sentences. The question of the truth of a thought is in effect reduced to that of a sentence. A sentence is a series of sounds with a sense, but the converse is not necessarily true. It is for the sense of a sentence that the question of truth arises. Without affecting the truth-value of a thought, it can be expressed in and through different forms of sentences. Simply because transformation of sentence-forms do not affect the truth-values of the underlying thought, we should not think that the difference of the sentence-form is basically indifferent to the logic of the concerned sentences, for logic is not concerned only with their truth-values. Truth-value-wise two sentences, one interrogative and another indicative, may be same, but they differ in respect of assertion or lack thereof. Analysis of an indicative sentence reveals not only its *content*, which is thought, but

also its *assertion*. In *thinking* we apprehend thought; in *judgment* the truth of a thought is recognized; and *assertion* is the manifestation of the judgment. Another component, e.g., 'Alas!' and 'Thank God!' is also at times a figure in indicative sentences of poetry and literature for the purpose of evoking feelings or arousing the imagination of the hearer. Deeper logical investigation of language must not be delinked from the purpose for which it is used in a particular case or context. Sometimes words fail to express the thought; sometimes the contents of a sentence go beyond the thoughts expressed by it. The tense of a sentence may be used for two different purposes: to indicate time-determination and to eliminate time-determination (i.e., tenselessness). In some cases the time and place of the utterance or writing of a sentence turns out to be an inseparable part of the correct expression of the truth-value of the thought. The pain that I have today cannot be correctly expressed tomorrow by the sentence 'I have a pain today', in that case I should say 'I had a pain yesterday', although the thought expressed by these two sentences remains the same. But, if Ram not knowing who I am says, 'D.P.C. had a pain yesterday', he does not mean what I express by saying 'I had a pain yesterday'. For though Ram uses the proper name 'D.P.C.', he cannot associate me or my identity with it. The truth-value of these two sentences is the same; but their senses are different. I get presented to myself in a way different from I get presented to Ram. This is because of the one ownership of every idea. Frege puts all mental concepts, sense-impression, imagination, inclination, etc. under the umbrella term 'idea'. Ideas are (a) owned by somebody, (b) need a bearer, (c) cannot be sensed, and (d) have each only one bearer. True, the association of the idea with the word 'I' in my consciousness is different from that of the idea with the proper name 'D.P.C.', in Ram's consciousness. But 'I am 'D.P.C.'. The question is: am 'I' (of my consciousness) 'D.P.C.' (of Ram's consciousness)? Frege answers the question in two steps. I have an idea of myself; it is a *content* among other contents of my consciousness; and, though I am its unique bearer, I am not identical with it. As an *object* of my thought, I am distinct from an idea of myself as a content of my consciousness. Ram (and, therefore, others) can also think myself as an object of thought. The object of my thought and their thought in this case is the same, i.e., the reference is identical. This is how, Frege thinks, we in fact break the solipsistic circle, tackle the problem of scepticism regarding other minds, other places and times, and successfully communicate 'our' *thoughts* to competent users and language(s).

What sort of entities then, are thoughts? Are they entities of the outer world or ideas? Or, has a third realm to be recognized for them? Frege's answer is very clear: 'A third realm must be recognized...The thought...expressed in the Pythagorean Theorem is timelessly true, true independently of whether anyone takes it to be true. It needs no bearer'. Frege's third realm or world was clearly anticipated by Bolzano's *third realm, category of entities*. From different points of view, Plato in his theory of Forms or Ideas

and Hegel in this theory of the Objective Spirit spoke of the inhabitants of the third world. In the recent past even Popper, who once talked of 'irremediable subjectivity of knowledge', has written on 'Epistemology without a Knowing Subject',²⁷ recalling Bolzano and Frege and defending 'the independent existence of the third world'. Compared to Plato's and Hegel's theory of the third world Popper's has more in common with 'Bolzano's theory of a universe of propositions in themselves and of truths in themselves, though it differs from Bolzano's also. Popper says, 'My third world resembles most closely the universe of Frege's objective contents of thought'. Frege's no-ownership theory of thought (or knowledge) is accepted by Popper. Besides thoughts and theories, Popper thinks, problems are also the inhabitants of the third world. Popper's third world, unlike Plato's, *evolves*. Frege²⁸ clearly recognises that by apprehending and communicating thoughts, we do bring about change in other's minds and the outer world and this view is substantially endorsed by Popper.²⁹ The no-ownership theory of thought, Popper apprehends, is sure to provoke those whom he calls 'belief philosophers' like Descartes, Hume, Kant, Russell, and, perhaps, Price³⁰ and Chisholm.³¹

Frege's ontology centres round the basic distinction between objects and functions. Everything is either an object or a function and nothing is both. Functions are said to be unsaturated, incomplete or in need of supplementation, while objects are said to be saturated, complete, and in no need of supplementation. Frege's semantics centres round the basic distinction between the sense and the reference of a linguistic expression. Any given sense or reference is either an object or a function. According to Jackson, (vide *Klemke*, p. 229) Frege thinks that the sense of an expression is an object (under the category of reference). One can easily quote from Frege in support of this point. Frege says, 'In order to speak of the sense of an expression "A" one can simply use the phrase the sense of the expression "A"' ('On Sense and Reference').³² In 'On Concept and Object' Frege gives his notion of a criterion of objects: 'The three words "the concept *horse*" do designate an object, but on that very account they do not designate a concept, as I am using the word. This is in full accord with the criterion I gave—that the singular definite article always indicates an object, whereas the indefinite article accompanies a concept-word.'"³³ Judged by this criterion, the sense of an expression is an object and can be referred to by an expression of the form 'the sense of the expression "...". But elsewhere, Frege says very clearly that the senses of some expressions are unsaturated:

- Not all the parts of a thought can be complete: at least one must be 'unsaturated' or predicative; otherwise they would not hold together. For example, the sense of the phrase 'the number 2' does not hold together with that of the expression 'the concept *prime number*', without a link. We apply such a link in the sentence 'the number 2 falls under the

concept *prime number*: it is contained in the words 'falls under', which need to be completed in two ways—by a subject and an accusative; and only because their sense is thus 'unsaturated' are they capable of serving as a link. Only when they have been supplemented in this two-fold respect do we get a complete sense, a thought.³⁴

Naturally, then, the problem arises: how could the senses be both objects and unsaturated? The root of the problem obviously lies in the ambiguity of one or more of these three notions—*object*, *sense* and *unsaturatedness*.

Frege thinks that the senses of some expressions, expressions for function, e.g., are unsaturated. Otherwise, according to him, objects and functions cannot fit together and there cannot be thoughts. The problem hinted at is analogous to the traditional problem of the relation between universals and particulars. Two particulars as such cannot fit together. What happens in the field of ontology happens also in that of semantics. Two or more name-words cannot fit together on their own and form a sentence, conveying a complete sense. 'The words "the relation of an object to the concept it falls under" designate not a relation but an object; and the three proper names "the number 2", "the concept *prime number*" (and) "the relation of an object to a concept it falls under" hold aloof from one another just as much as the first two do by themselves; however we put them together, we get no sentence.'³⁵ Both to fit a function together with an object or objects and to fit senses together, Frege is obliged to posit not only entities of two kinds, saturated and unsaturated, but also senses of two kinds, saturated and unsaturated. A thought is a complex of senses which fit together somewhat in the way a function and its argument fit together. If senses are all saturated, they cannot form a thought-complex, for there is nothing to hold them together. Though a thought is not truth-value, both are objects; the former has the latter. Truth-values are yielded by functions whose values are truth-values, when completed (or saturated) by suitable arguments. The truth-value which is the value of such a function for a suitable argument cannot possibly consist only of the function and its argument. In the thoughts '3 is greater than 2' and '2 is greater than 3' the sense of '2', '3' and 'is greater than' are fitted together differently; similarly, the function and its arguments are of such kinds that in one case the value yielded is True and in another False.

According to Frege, as we have seen, whatever is is either a function or an object. Senses, then, are either all functions or all objects, or some of them are functions and the rest objects. We have already been told by Frege that all functions are unsaturated and now we see that, according to him, the senses of some expressions are unsaturated. From these two doctrines taken together what follow are (a) some senses, i.e., the saturated ones, are objects and (b) some senses, i.e., the unsaturated ones, are functions. But it seems incompatible with the view that the senses of an expression are objects.

(vide *Klemke*, p. 229). This seeming incompatibility can be explained, perhaps, in terms of his notion of different function-levels: 'Just as functions are fundamentally different from objects, so also functions whose arguments are and must be functions are fundamentally different from functions whose arguments are objects and cannot be anything else. I call the latter first-level, the former second-level, functions. In the same way, I distinguish between first-level and second-level concepts.'³⁶

By extending this line of reasoning, one can, as Caton does,³⁷ say that Frege's view that no object is unsaturated can be given a plausible interpretation. No object can be logically introduced as an appropriate argument of any unsaturatedness function of which a function is an appropriate argument. For it involves level-confusion. 'Any unsaturatedness which is truly or even meaningfully predicable of a function must itself be of at least the second level, and to predicate a second-level function of an object is, according to Frege, nonsense'. Given this interpretation, the other two theses of Frege, viz., the sense of an expression is an object and the senses of some expressions are unsaturated, can be shown to be consistent.

The distinction between objects (1) and objects (2) referred to by Grossman shows another important aspect of his ontology.³⁸ According to Frege, object is what falls under a concept, and is saturated, and has for its expression a noun accompanied by a definite article. Both Bolzano and Frege have noted that object-words behave in two different ways. Bolzano says, entities which exist at a certain place and for a certain length of time can be said to be objects (1). Individual things, properties, relations and mental states are examples of objects (1), which are *essentially* ontological. Senses, though objective, do not exist in the manner objects (1) do, and can be said to be objects (2). Frege's notion of sense is different from and more refined than, Bolzano's. That Frege could replace Bolzano's subject-predicate analysis of proposition by his own refined function-argument analysis is partly because of his insight into, and the ability to make the right use of, the latter's notion of conceptual content. By according primary importance to the conceptual content of a proposition rather than to its sentential expressions, one could see through the relative unimportance of the objects and predicate places of a proposition. The object-concept distinction did not come in for sharp focus in Frege's writings until 1892, because, following Bolzano, he thought at that time that all the components of a proposition are concepts and that a proposition is a sum of its conceptual contents. In fairness to Frege, it should be admitted that even at that time he realised the necessity of introducing the so-called second-level concepts which could be meaningfully predicated of first-level concepts. Otherwise three concepts of the same level—an individual concept, a general concept, and the relational concept of falling under a concept—could not logically yield a proposition. To interpret the proposition, 'This rose is red' Frege needs only two concepts—'this rose' (individual) and 'red' (general)—and not the third one ('of having' of

Bolzano, i.e., copula). In addition to individuals and properties, Frege does not need the third entity, relation of exemplification or the relational concept of falling under (a concept). In other words, he needs no 'tie' to tie up objects (1) and concept, or concept-correlate [object (2)] and concept, or lower-level concept and higher-level concept. According to him, *direct* logical relationship between concepts and objects can be established because of the unsaturated or incomplete character of the concerned concepts. The unsaturatedness of concept functions as a sort of 'liaison' between it and the appropriate object. The point has been re-emphasised in 'On the Foundations of Geometry'.³⁹

In the sentence, 'Red is a colour', we find two concepts, 'Red' and 'is a colour', both unsaturated, one more so and the other less so, and none accompanied by a definite article; the former, a lower-level concept and the latter a higher-level concept. 'Red is a colour' is as natural a sentence as 'This rose is red' and yet it does not readily lend itself to the Fregean analysis of proposition unless it is put in the form 'The concept red is a colour-concept'. Then it can be said that a certain concept-correlate of 'the concept red' [i.e., an object (2)] falls under a certain concept, 'is a colour-concept' in this case. Frege draws a line of distinction between (a) how two concepts (of course, of different levels) and (b) how an object and a first-level concept are held together in propositions. 'The relation of an object to a first-level concept that it falls under is different from the (admittedly similar) relation of a first-level to a second-level concept. (To do justice at once to the distinction and to the similarity, we might perhaps say: An object falls *under* a first-level concept; a concept falls *within* a second-level concept). The distinction of concept and objects thus still holds, with all its sharpness'.⁴⁰ But certainly 'this rose' (of the proposition 'This rose is red') refers to or names an object which is different in kind from what is referred to or named by 'Red' (of the proposition 'Red is a colour') or 'The concept red' (of the proposition 'The concept red is a colour concept'). 'This rose' names an object (1), and an existent (1) whereas 'The concept red' refers to an object (2) and is (yet) an existent (1). The matters become problematic with the expression like 'nothing' and 'Round Square'.

Frege speaks of two senses of 'there is' exist (1) and exist (2).⁴¹ In one case the question is whether a proper name refers to, names, something; in the other case we use the words 'there is a...' and see if the concept which fills up the blank space takes objects under it. A proper name without any reference is logically illegitimate. But the legitimacy of a concept word must not be judged analogously. For a concept word refers to or names a concept under which something may or may not fall. In the sentence 'There is no round square', 'round square' is not an empty name but a name of an empty concept, i.e., a concept under which nothing falls. 'Nothing' and 'round square' do name, or refer to, concepts, have senses, but are without examples. Proper names (i.e., 'Jimmy Carter'), 'this rose' and terms (irrespective of

the fact whether they name empty or non-empty concepts) exist (a). This is the broader sense of *existence*. Following the other or the limited sense of *existence* one can say, 'Tables exist (2)' and 'Round squares do not exist (2)'. In other words, round square exists (1) as just a concept, and does not exist (2); it exists as a concept without possible exemplification: According to Bolzano, as we recall, concepts do not exist like objects (1), i.e., properties and relations, which exist independently of minds and are localized in space and time. But Frege does not distinguish between concepts and properties; further, according to him, concepts (properties) are not in the world of space and time; nonetheless they are clearly said to be existents. One way of interpreting the objectivity or mind-independent character of properties and relations is to say that they are exemplified by individuals in space and time. This is the interpretation Grossman puts on Bolzano's concept of objects (1): properties are localized (2) and not localized (1), i.e., not in the sense properties themselves are.⁴² Fregean concepts are neither localized (1) nor localized (2), for they neither exemplify spatial and temporal relations nor are they exemplified in space and time. If these considerations are accepted as good enough for declaring one's ontology as nominalistic, then it is difficult to deny that Frege's is nominalistic. This is broadly the line of considerations Bergmann follows to declare that Frege's position is that of a nominalist. But one can with equal, if not more, plausibility first point out (a) that even if no objects fall under a given concept that does not mean that the concept word does not stand for something⁴³ and (b) that the concept is logically prior to its extension,⁴⁴ and, then, on the basis of (a) and (b) conclude (c) that Frege's position is realistic.

One of the most influential principles has been referred to by Wittgenstein both in *Tractatus* 3.3 and *Philosophical Investigations* (sec. 49) from different points of view but for relatable reasons. As we know, this view of Frege⁴⁵ has been most systematically criticized by Quine and Goodman. Dummett suspects that this criticism by the leading two nominalists rests on a misunderstanding of the above principle of Frege. When one knows the *sort* of context in which a word is used in all the possible sentences in which it could be used, then one knows the sense of that word; if one wants to determine thereafter the reference of the word, linguistic knowledge alone will not be enough. Goodman⁴⁶ finds only those 'named objects' intelligible which are definable in terms of his basic individuals, 'qualia'—such things as colours, times, visible places, noises, smells, etc., 'concrete' (i.e., temporally locatable) sensations are then defined in terms of qualia with the help of the calculus of individuals. This is precisely the idea what Frege rejects in the course of his criticism of Schröder's domain-calculus: 'I do...maintain that the concept is logically prior to its extension...I regard as futile the attempt to take the extension of a concept as a class, and make it rest, not on the concept, but on single things. That way we get a domain-calculus, not a logic.'⁴⁷ According to Goodman and Quine, the issue of nominalism and realism appears

only in the context of some formal system. Object-concept distinction is for them context-bound. Frege is for explicit definitions and against contextualist ones. According to the nominalist, object-words and concept-words are interchangeable, i.e., concept-names can be logically treated as proper names following the model of Russell's theory of description. A system is said to be realist if it uses the technique either of set theory or of higher-level quantification; and a system is said to be nominalist if it dispenses with these techniques and uses at most the calculus of individuals. Quine is for a language which contains no quantification or other expressions of generality, but only atomic sentences and their compounds by means of sentential operators. Free from quantification, such a language is said to be free from ontological commitment—free even from referents of proper names. By means of his *qualia* Goodman can introduce in his system names of colours and times but not of shapes and sizes. He finds classes, properties, functions, etc., unintelligible entities. One encounters similar difficulties in Quine's system as well⁴⁸. According to Quine, the colour red is something 'concrete' — the sum total of red things—'a spatially extended particular on a par with' the river Thames. We are advised to understand some universals as spatio-temporally scattered objects. But there are universals which cannot be understood that way. Colour-adjectives, but not shape-adjectives, can be construed as proper names. Colour as a name can be ostensibly identified and its predicate formed in terms of, say, light-wave frequency. But, in the case of shape, though its identity can be indicated by ostension, its predicate cannot be made intelligible without countenancing abstract entities. By rejecting classes, the nominalist rejects shapes. By accepting sums, he can give a somewhat satisfactory model of analysis for colour-expressions but, scrutiny reveals, shape-expressions cannot be assimilated to that model. An unrelenting Frege would remind us that the extension of a concept does not consist of 'qualia' or 'sums of molecule-moments' or even objects (a more 'concrete' sounding word). The nominalist drive for ontological austerity lands us in the domain-calculus 'in which the fundamental relation is that of part to whole' and which 'is not a logic'.

Recently, Strawson⁴⁹ has offered a pro-Aristotelian defence of Frege against the Quinean line of criticism. The defence is based on the asymmetry of naming and predication or the distinction between *particulars* and *universals*. Particulars are referred to only by means of a singular term and universals by either a predicate or a singular term. The same entities, universals, are referred to by means of the common noun 'red' and 'is red' when 'red' is an adjective. Particulars are like Aristotelian substance of which things can be predicated but which cannot be predicated of anything; universals like qualities can both be predicated of something and have things predicated of them. Of course, Frege would point out that though concepts have references, concept-words are not proper names in the strict logical sense in which object-words are. 'Concrete' objects and 'abstract objects' are not named

in the same sense. Quality does not exist in the sense substance does. According to Aristotle, the quality colour exists in a coloured substance or object *and the latter itself must be empirically existent*. The conservative Aristotelian condition (indicated by the words 'and the latter itself must be empirically existent') attached to the criterion of existence is dispensed with by Strawson. His criterion for the existence of a colour or universals in general is relatively liberal. According to Strawson, by saying that a universal (or a colour) exists, one is not committed to the *actual* existence of a particular instance of that universal (or of a coloured object). If the ascription of that particular quality does not involve any logical contradiction, i.e., if it is logically *possible*, one can take it as existent, no matter whether it is empirically existent or not. In effect, Strawson draws a distinction between the *actual* existence of particulars and the *possible* existence of universals and not between the actual existence of particulars and actual existence of universals.

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Models and Metaphors in Arts, Science and Mathematics

FEW TERMS are used in popular and scientific discourse more promiscuously than 'model'. A model is something to be admired and emulated, a pattern, a case in paint, a type, a prototype, a specimen, a mock-up, a mathematical description—almost anything from a naked blonde to a quadratic equation—and may bear to what it models almost any relation of symbolisation—Nelson Goodman.¹

It is of no use trying to give a definition of 'model'. For it has been put to diverse uses, some of which conflict with each other and some others conflate.

We, humans, are by nature sign-and symbol-using beings. Signs and symbols are necessary for what I call transfer of experience or thought (henceforward TET). Communication, expression, presentation, painting, sketching, mapping, sampling, illustrating, etc., are some of the ways of TET.

There is a generic human need which obliges us to resort to some form or other of TET. Experience has an inherent objectwardness or self-transcendent character. This self-transcendence is not aimless. It has an aim and also an object to present or represent to us, or has a message in code to convey to the perceiver of the linguistic or some other sign of it. Even for the purpose of retention of an experience in memory, one is obliged to postulate a theory-loaded and self-transcending element in it.

I prefer the expression *transfer of experience* to *communication of experience* for a particular reason. Symbolisation of experience, although intended for the purpose of communication, proves at times unsuccessful. The term 'communication' conveys the sense of successful transfer. But it is well-known that many cases of intended transfer remain unexecuted or go misunderstood. By TET I mean both successful and unsuccessful cases of communication. TET may be primarily structural or *comprehensive* as in mathematics or primarily *informative* as in arts and common sense.²

Success or otherwise of TET depends on so many factors, sociolinguistic, epistemological, semantico-ontological, etc. Problems of TET in a homogeneous group or in a horizontal situation, i.e., a situation in which the speaker and the hearer successfully share and use a large number of pre-

suppositions and expressions, are considerably different from those in a heterogeneous group or vertical situation, i.e., a situation in which the speaker and the hearer do not share sufficient number of presuppositions and expressions necessary for the purpose of successful communication. Heterogeneous group of alien cultures can also communicate through demonstratives, primarily in respect of sensible properties of material objects.

TET has many levels. For the sake of simplicity we may recognise only three: (i) literary and artistic, (ii) common sense and (iii) scientific and mathematical. These levels are not sharply demarcated. In order to transfer our thought or even experience we have to make use of names, individually or in a nexus, sentences, referential and descriptive expressions, analogies and metaphors, depending on the nature and scope of discourse. Written language or other media used for the purpose of TET are hardly one-rayed, or exclusively referential. Most of the problems of TET arise from this frequently ignored fact.

Language has two levels, one that obtains when we think of language in itself and the other that obtains when it is used. Unfortunately, these two cannot be sharply separated. For language, written or otherwise, e.g., dance and music, essentially works as a changing social institution. The believers in the reference-paradigm language often forget the inseparable relation between the sense and the reference of language³.

Some thinkers are all for linguistic clarity and definiteness and against ambiguity and obscurity.⁴ They want to get rid of inconsistencies of ordinary usage, multiplicity of labels applicable to a particular object, variation and inaccuracies of label, and difference of reference of the same expression within a particular given system. The thinkers of this persuasion prefer a scientific-mathematic model of language to a common sense or a literary one. But there are thinkers of repute who insist that scientific-mathematical language, though definite and relatively free from ambiguity, is poor and parasitical. Poor, because it is mainly meant for transfer of thought and not of experience, common sense or artistic; parasitical, because its definiteness is the gift of the parent ordinary language itself which is often unwittingly berated by the defenders of the first group. Many of us forget that language performs the double duty of expressing and of suppressing, of projection and of exclusion. It is of great interest in this context to study why we need metaphors, analogies and models not only in the language of art but also in that of science and mathematics.

We need metaphor because we want to convey or express what is not referentially expressible in a one-rayed way.⁵ The paradigm of truth which is sought to be approximated, if not grasped, through referential approach proves almost invariably elusive. But the quest for truth is not and cannot be easily given up because of referential incommensurability. That is the prime reason which leads us to supplement the reference — failure part of the purported referential approach to linguistic expression by metaphors and

analogies. Metaphor may work both as supplemented reference and suspended reference. In poetry and other forms of art metaphors primarily work as suspended reference. But it would be wrong to think that metaphors have no referential role at all to play. The fact that *criticism* is not peculiar to hard factual discourses of natural and social sciences and has also very important place in fine arts implies, among other things, that metaphors and analogies indicate the almost invisible but very important lines of distinction between what is appropriate and what is not, between the beautiful and the ugly, between the nude and the naked, and so on.

In a way metaphors are more akin to exemplification and expression as distinguished from representation and description. Representation and description connect a symbol to things symbolised, whereas exemplification connects a symbol to a label that refers to it. Expression connects a symbol to a label that refers to it. Expression connects a symbol to a label that metaphorically denotes it. Referential relationship of labels to things and what stand for them may be further prolonged.⁶

Naming is easy. But not at all easy is it to name things in a way which could strictly be regarded logically proper. Tying symbols to things is such a complex and difficult job that many thinkers have thought that it is impossible. Presumably they took *rigid* tie-up as the only acceptable paradigm. Some others, in despair, have concluded that name-nominatum tie-up is nothing more than an instructive metaphor in a definite social context.⁷ It seems to me that there is bound to be a gap between the symbols, linguistic or otherwise, used to name, denote or refer to, describe, represent, express, reject, label or classify, on the one hand, and symbolised things (in the broadest sense), on the other. Consequently, one can always speak of a phenomenological no-man's land between, say, description and description—as, sketching and picturing. It is in this context that one has to appreciate the use of metaphor, analogy, and other forms of rhetoric in the semantics of the aesthetic language in general. It is against this background that I try to 'hear' Kandinsky's 'sounds of picture', try to understand Matisse's assertion 'I cannot copy nature in a servile way, I must interpret it' and, Picasso's 'point of view of art (from which) there are no concrete and abstract forms, but only forms which are more or less convincing lies.'⁸ Paul Klee rightly observes :

Mathematics and physics furnished the means in the form of rules to be followed and to be broken...Studies in algebra, in geometry, in mechanics (teach us) to look behind the facade, to grasp the root of things.

And this provides the transitional link between the level-distinct languages of arts, common sense, science and mathematics.

That analogies, metaphors, and models are widely used not only in literary and common sense languages but also in scientific language may be

extensively illustrated.⁹ In fact, this is a basic requirement of TET. Besides, the different levels of language are connected and continuous in a complex group network (not in a straight-jacketed deductive form). From the vast literature on science one may easily get many instructive analogies and models. The analogy between atom and solar system and that between a gas and a container of billiard balls are well-known. Equally well-known is the analogy drawn by Maxwell between the electric field and an imaginary incompressible fluid flowing through tubes of variable section. Analogies between two things, say, A and A' is indicative of the existence of certain similarities between them. The similarities may be structural or functional. Gas molecules and billiard balls, though as substance different, are *functionally obeying* the principles of classical mechanics all the same. On the other hand, a Bohr atom is analogous to a planetary system in respect of their geometrical movement in an elliptical orbit.

Analogies are bound to be abstract and hold good only between dissimilar objects. These are used in science mainly to clarify conceptual understanding. Clarification may be brought about in two different ways, (i) through comparison between both similarities *and* differences of A and A' and (ii) through highlighting only the similarities between the two.

Model and *analogy* are kindred concepts. The Bohr model postulates orbiting electrons by analogy with a planetary system. Model is often a refinement of and development upon analogy. The billiard ball model has been constructed by the propositions stating that gases are composed of tiny elastic spheres. The analogy is drawn between gas particles thus described and perfectly elastic billiard balls.

Models are of various types. Achinstein speaks of three sorts of models. (1) representational, (2) theoretical, and (3) imaginary. Representational models seek to preserve the three-dimensional physical properties of the object modelled. Models of the solar system in science museum, engineering models of atoms, and an electrical circuit model for an acoustical system, etc., are examples of representational models. Even in representational models there are unavoidable elements of distortion or deviation necessitated by the process of TET reproduction.

Billiard ball model of gas, the Bohr model of the atom, the Corpuscular model of light are some of the famous theoretical models. A theoretical model satisfies a set of assumptions about some objects or systems. The billiard ball model satisfies the assumptions regarding the way the gas molecules behave in a gas chamber. A theoretical model is a structural description. The billiard ball model describes the molecular structure of gases enabling one to derive the principles relating to pressure, volume, temperature, entropy, and so on. A theoretical model is to be regarded as a simplified approximation to an object or a system of objects and should not be confused with diagrams or pictures which are used for the purpose of constructing the model.

Cases are known when imaginary models have also been used. Poincaré's model of a Lobachevskian (non-Euclidean) world and Maxwell's mechanical model of the electro-magnetic field are often referred to in the history of science as magnificent examples of imaginary models. Imaginary models are primarily heuristic in character and do not purport to be descriptive. These are sometimes discovery-oriented and sometimes invention-oriented. Maxwell, for instance, intended his imaginary model to promote further investigation into the actual structural properties of this field. Poincaré's model suggests 'possible worlds' which obey the abstract Lobachevskian principles.

On the broader question whether models are intended to be heuristic or descriptive there are two very well-known views, one represented by Duhem defending the heuristic-phenomenalistic point of view and the other by Campbell defending the descriptive-realistic one. It seems to me that practising scientists take a compromising, may be a little unphilosophical, attitude towards the issue. Models are necessary both for discovery and invention, to find out what is already there and also to make possible what is not there; in the latter case use is made of the elements and structures of what is already there.¹⁰

Model has been used also in the sense of structure, not only in mathematics (the Bourbaki programme, e.g.,) but also in linguistics (Jakobson and Chomsky, e.g.,) and social sciences (Levi-Strauss and Von Neumann, e.g.,). Group theory, for example, shows the importance of structural model in mathematics. In group structures conservation and transformation go together. Transformation means intelligible change, intelligibility being ensured by identity, associative combination and inversion of the elements. The Bourbaki programme reveals three parent structures, (1) *algebraic*, its prototype being mathematical group, including rings, fields, etc., (2) *order*, its prototype being 'lattice' or 'net-work', and (3) *topological*—neighbourhood, continuity and limit being its basic concepts.¹¹

So far as logical models and mathematical models are concerned, I am not inclined to draw a sharp line of division between the two. Formal logic consists of sets of axioms, their deductive consequences and interpretations, and also of the theorems in models, i.e., the sets of entity which satisfies the axioms. Elementary geometry exemplifies these relationships most clearly. The sentence 'any two points lie on one and only one straight line' is an axiom in a formalised geometry in which theorems like 'point' and 'straight line' may not be explicitly defined. Rigorously taken, the formal system requires that these terms should be fully defined; otherwise their relationship and deductive consequence would not make the axioms a formal system.

Similarly, a formalized Boolean algebra can be interpreted as a calculus of classes, as a calculus of propositions, or in terms of space-areas as shown in the Venn diagrams. Any set of entities which constitutes an interpretation of all the axioms and theorems of a system which holds true in it may be called a model (in the logical sense) of that system.¹²

The logical sense of 'model' has given rise to an extensive use of the word in a variety of mathematical theories developed in the sciences. Today it is a common place to speak of 'probabilistic models' in a psychological learning theory or demographic dynamics, e.g. In this sort of cases 'model' refers to a mathematical theory containing the axioms of probability and interpretations of all or some of the non-logical constants and variables of the theory into observables. It has been said, by Max Black, e.g., that purely *formal* mathematical models have hardly any causal or explanatory power, for the concerned theories are nothing but convenient expressions of the observables in mathematical language. But there are probabilistic theories which have some element of *material* (and of course, formal) analogy. For example, the limiting-frequency interpretation of the axioms of probability does have some material analogy with a logical or range model of probability; for similarity of the two concepts is evident in games of chance: and this cannot be said due only to formal analogy of the games with their axiom system but may also be understood independently of the said system. When theoretical model has such a material analogy one can say that they had causal, predictive and explanatory power. This aspect of material analogy of the mathematical models also lends support to the realistic interpretation of the model concept defended by Campbell and Popper against the interpretation of the same given by Duhem, Mach and Herz.¹³

The construction of mathematical models involves decision making at two levels; first, what is essential and what is not essential from the standpoint of the model to be constructed; and, second, the specific character of the assumptions of the model. If the assumptions are *probabilistic*, then the model is of one type. If the assumptions are *deterministic*, the model is of another type. Probabilistic model-makers do not expect exact predictions in individual cases, and, therefore, their method of model-testing is bound to be different from that of the deterministic model-makers. The adequacy criteria of the probabilistic models and of the deterministic ones are also bound to be different in empirical sciences, both social and natural. Though deterministic models may, at times be preferred and even aimed at, most of the practising scientists have been content with the outcome of the probabilistic models. It is to be observed here that at the level of model-construction as such it is of no consequence whether a model-maker is committed to a deterministic ontology like Einstein's or Marx's, or firmly believes in the Heisenberg Principle of Uncertainty or in Bohm's hidden-variable sort of ontology.¹⁴

Mathematical models may be dynamic or static. Static models define systems which do not change *with* time or systems which have reached a state of equilibrium in time. Dynamic models are concerned with time changes.¹⁵ Dynamic models are not generally found to be very exact or accurate in their predictive power, for a little change in the magnitude of the values of the variables result in considerable difference in the predicted outcome.

The main characteristic of the dynamic models is that the probabilities are functions of a discrete parameter and, as we know, such processes are called stochastic.

One final word. Whatever model or metaphor—artistic, commonsensical, scientific or mathematical, we use, our purpose, generically speaking, is the same, namely, TET, transfer of our experience and or thought. This, however, is not to deny that model construction in itself might be an intellectually or emotionally, satisfying work. This is perhaps particularly true in the case of imaginary models. Model construction, though initially motivated by heuristic considerations, is primarily result-oriented, pattern-projecting, pattern-searching and observables-connecting. However, results and facts may be of different variety, depending on the nature of the discourses, from mathematical to musical. From Pythagoras to Einstein we have an unbroken chain of philosopher-mathematicians harping on the theme of the *basic* unity of mathematics and music expressible in terms of number and geometry.

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4. J.G. Kooji, *Ambiguity in Natural Language*, North-Holland, Amsterdam, 1971. On the relative merits and demerits of ordinary languages and formal languages the literature is already vast and growing. But the writings of Frege, Russell, Gödel, Wittgenstein, Ryle and Austin are a must for one interested in this problem.
5. Paul Ricoeur, *The Rule of Metaphor: Multi-disciplinary Studies of the Creation of Meaning in Language*, tr. Robert Czerny, etc., Routledge & Kegan Paul, London, 1977.
6. Nelson Goodman, *op. cit.*, pp. 85-96.
7. See, for example, the papers of Saul A. Kripke and Keith S. Donnellan in Donald Davidson and Gilbert Harman (eds.), *Semantics of Natural Language*, D. Reidel, Dordrecht-Holland, 1972. See also, Quine's replies to Dagfinn Føllesdal and David Kaplan in D. Davidson and J. Hintikka (eds.), *Words and Objections*, D. Reidel, Dordrecht-Holland, 1975 and the discussion between Marcus, Quine, Kripke, McCarthy, Føllesdal on Marcus' paper 'Modal Logics I', Marx W. Wortfosky (ed.), *Boston Studies in the Philosophy of Science*, D. Reidel, Dordrecht-Holland, 1963. The works of anthropological linguists like B.L. Whorf, J.R. Firth and Dell Hymes are of considerable interest in this context.
8. Robert Goldwater and Marco Treves (eds.), *Artists on Art from the XIV to the XX Century*, Pantheon Books, New York, No date.
9. Peter Achinstein, *Concepts of Science: A Philosophical Analysis*, The Johns Hopkins Press, Baltimore, 1968. See also Mary Hesse, *Models and Analogies in Science*, London, 1963; Max Black, *Models and Metaphors*, Ithaca, New York, 1962.

10. Fierre Duhem, *The Aim and Structure of Physical Theory*, tr. Philip P. Wiener, Atheneum, New York; Norman Campbell, *What is Science?* (Dover). See also, for example, A. d'Abro, *The Rise of the New Physics*, 2 Vols. (Dover); L. de Broglie, *Matter and Light: The New Physics*, (Dover); Max Born, *The Restless Universe*, (Dover); and S. Korner (ed.), *Observations and Interpretations in the Philosophy of Physics (with Special Reference to Quantum Mechanics)*, (Dover).

11. On Group Theory the works, for example, of William Burnside, *Theory of Groups of Finite Order* (1911 & 1955) and Volker Heinze, *Group Theory in Quantum Mechanics* (1960) are said to be standard. On Fields and Rings the work of G. Birkhoff and S. MacLane, *A Survey of Modern Algebra* (1965); and on topological groups D. Montgomery and L. Zippin, *Topological Transformation Groups* (1955) are often referred to in the concerned literature. E.H. Spanier's *Algebraic Topology* (1966) is useful for understanding the many-sided influence of this branch of mathematics on various subjects ranging from symbolic logic to the designing of geographical maps, of networks for the distribution of electricity, water and natural gas.

12. See, for example, John E. Whiteslitt, *Boolean Algebra and Its Application* (1961); and W.S. Hatcher, *Foundations of Mathematics* (1968).

13. William Feller, *An Introduction to Probability Theory and Its Applications*, 2 vol. (1967). See also, Rudolf Carnap, *Logical Foundations of Probability* (1950) and Karl Popper, *The Logic of Scientific Discovery* (1959).

14. Victor Guillemin, *The Story of Quantum Mechanics* (1968). See also Werner Heisenberg, *Physics and Philosophy* (1958); David Bohm, *Quantum Theory* (1961); Stephen Korner, *op. cit.* In the context of the composition and behaviour of atomic nuclei one hears of several models—liquid-drop models, shell models, unified models, statistical models and so on.

15. J.G. Kemeny and J.L. Snell, *Mathematical Models in Social Sciences* (1962). The examples of static, dynamic and opposite models may be drawn both from social and natural sciences. References quoted above contain numerous examples of these types. In social sciences, particularly in economics and linguistics, logico-mathematical tools and models are being increasingly and successfully used. See, for example, the economic growth models associated with the names of (i) Harrod and Domar, (ii) Meade, Solow and Samuelson, (iii) Von Neumann, and (iv) Leontief. For a scholarly but short survey of the growth models the paper of F.H. Hahn and R.G.O. Mathews in *Surveys of Economic Theory: Growth Development*, vol. II Macmillan, New York, 1969. In anthropology Levi-Strauss and his followers are advocating a pro-structural but, rightly understood, composite model; for elements of history, though in encoded form, have been recognised by them. I am not quite sure whether Chomsky's 'transformational Grammar (TG) model is static or dynamic simply because of its proclaimed open-endedness.

Heidegger on Language and Poetry

ART is born out of alienation of man's consciousness from the world around and within it. If the world is allowed to remain in its natural form, the forms of art are impossible. In its encounter with the world the human mind is obliged to shed partly its own naturalness and to get estranged or alienated from the same world. This line of argument is there in Hegel and, in a sense, also in Plato. In the case of the latter, one finds that art has been defined as a sort of imitation. In effect, the attempted imitation never fully fructifies. As a result of that what the human mind in its attempt to imitate nature succeeds in achieving is marked by some degree of distance or alienation. The artist as a creator is inevitably distanced and differentiated from the world-as-it-is. More positively speaking, artistic creation, purported to be imitative, turns out to be only partially successful. Paradoxically speaking, one's success in art consists in one's failure to grasp the reality in its natural form. The artist creates by alienating himself, his awareness, from the 'real' world.

From what has been said above one might conclude that Heidegger's position on art is an extension of the western history of aesthetics from Plato to Hegel. But that would perhaps be a banal interpretation of the matter. Heidegger's view on art in general and poetry in particular may be viewed both from within and from outside. It is quite possible to look into the concepts deployed by him in describing aesthetic experience and to ascertain to what extent the same conform to or depart from the conceptual schemes used by his European predecessors. One cannot fail to note that Heidegger's concept of *Dasein* and its relation with language are systematically articulated in new, continuously new, ways. In a way this is perhaps expressive of the fact that while thought precedes the language in which it is born and develops, it is bound to undergo change. Admittedly, Heidegger's thought belongs to the western tradition and therefore shows its continuity with and affiliation to it. But, at the same time, it has to be admitted that it has a personality and novelty of its own. This new personality is particularly evident from his own language marked by its nuances and understandable ambiguity. Born in the womb of western metaphysics, Heidegger's own metaphysics unmistakably shows something very new. Similarly, Heidegger's language of art, nourished by western tradition, goes beyond it and assumes a new definitive character.

Any interpretation of Heidegger's aesthetics has to follow the path traversed by Heidegger himself as a man in order to give a faithful account of what he said and meant. Going out of the path of Heidegger one cannot interpret Heidegger correctly; following it literally one cannot interpret it either. The interpreter has to do the double duty of following him and yet creating him anew in the light of his own understanding. This is what Heidegger himself did in relation to the western European aesthetics. He followed it, but not blindly. He re-created it.

In *Being and Time*, in the course of delineating the concept of *Dasein* as Being-in-the-World, he tries to show *Dasein* as mood, presentation, symptom and symbol¹; as primordial understanding, a mode of encounter with Being as present, disclosure of meaning; as *logos*, enveloping structure, covering form, relatedness and language.

The main thrust of Heidegger is towards the entire complex of Being-in-the-World, meaningfulness as the basic form of the World and the possibility of *Dasein*'s own power to be and not to be. Being cannot get itself, still less the world, without understanding itself as a searching project, a project for new discovery, new finding out and new articulation.

Situated in the world, Being's understanding of the world is invariably coupled with its self-understanding. Interpretation is the simultaneous articulation of man's self-encounter as well as his world-encounter. Negatively speaking, interpretation is not merely gathering of information about what is understood. 'It is rather the working-out of possibilities projected in understanding.'

Primordial understanding has a mode of its own, and, at the same time, a mode of articulation of what it can possibly grasp. Primordial understanding unfailingly moves in some context or other of meaning. Within the world as a totality of meaningfulness, man's understanding carves out some specific meanings, meanings through acts of utterance and of performance. Words do not become what they are only on their own account. Their being consists in disclosure of some meanings. Both meanings and their contexts are simultaneously present to understanding in an inseparable form; words are called upon to embody and articulate that intimate relation. *Logos* holds in its bosom the meaningful articulation of the intelligibility of man's place in the world. One must be careful not to identify *logos* with language. The former is *constitutive* of the meaningful totality of the world and the latter is the *way* this constitution receives articulation and re-articulation. Metaphorically speaking, it is by using the ladder of language that *logos* succeeds in setting its feet on the firm ground of the world. If *logos* is the mother of communication, language is its visible midwife, the way of making it successful. But the said success presupposes what is called *Mitsein*, Being-with. Communication is obtainable and sustainable only between and within *Dasein*, between a being and a being. Communication and community are simultaneous in their existence and operation. Not only one's mode of

thought but also one's mood of mind are steeped in the forces of the community's culture. *Logos* conceives and nourishes culture, language articulates and enriches it.

For a proper understanding of communication the relation between *logos* and language is very necessary. This is necessary also for the understanding of the essential poetic nature of language.

Logos is said to have four moments in its life: (i) as a *subject* talked about, (ii) the ways of talking about, (iii) *communication*, and (iv) *manifestation*. What we talk about is not the same as the ways it is talked about. The same theme may be differently articulated, producing and intending diverse effects. *Logos* always carries in it something and takes it beyond its original locus. Hence it is always generative of and responsible for transportation and transformation of the original given. Also it makes clear what is not so clear. It has a manifesting power in it and underlying it. Whatever it has in it gets naturally expressed. It is shining and open. In this sense *logos* stands in close relation to the very nature of man's being.²

Logos may be described as the bottomless ground of language. It also imparts the driving force to the latter. The linguisticity of language is most clear in its *present* form; the past and the future of language are more or less opaque. The immediacy of language-at-hand shows its living and driving forces.

According to Heidegger, it is in poetry that the essence of language is most clearly manifest. Poetry reveals the truth of human nature. Like the essence of poetry, the essence of human nature is expression, clear expression. In between the successive expressions of human nature one finds conformity, unity and harmony. These are there because the root of expression is man himself, his spontaneity and creativity. Though Heidegger defines truth as *correspondence*, the term here is to be understood in a special sense. It is a sort of *conformity*, (a) conformity between anticipation and experience, (b i) conformity which is basically judgmental, and (b ii) conformity as correspondence between intellection and the things objects intellectually grasped. When the anticipated becomes a matter of experience, we can certainly say that there is a correspondence or conformity between the two. Judgment, as we know, is required to be true in respect of what it is about. In the act of predication one wants to grasp the subject truly. This truth is a sort of conformity between the subject of judgment and judgment itself. Even when the apprehension of an object by consciousness does not amount to judgment or is not itself a judgment, there is a minimal conformity between what is apprehended and our mode of the said apprehension.

Even having carefully analysed the different forms of conformity as truth, Heidegger feels unhappy. 'Unhappy', because he feels that concept of truth merits a deeper analysis, an analysis that could bring the concept of truth closer to the very nature of man. Here he describes truth as experience and co-relate of openness. Truth is not static. It is like the process of the blossom-

ing of a flower. Like a flower, it goes on opening. Openness is its essence. Truth is experiential openness. Correspondence or conformity has to be understood under the aspect of openness. Both saying and what is said, both judgment and its subject matter, receive the same shining light and openness of man's native nature.

Openness has two forms or rhythms in it, *positing* and *creating*. Man posits his experience, tries to posit it as faithfully as he can, remaining faithful to his felt experience and feeling all *incoming* experiences. But that is not all. He does not merely posit but also creates—creates new objects and new forms out of the rich and inexhaustible resources of his experience. It is in the creative rhythm that experience assumes added meaning. When the truth of being is posited and particularly created, the fullness of the meaning of being becomes more and more clearly evident, strikingly expressed, and successfully communicated.

From what has been said above regarding the nature of truth as *openness* one must think that it is the whole of the story of truth. Like the openness of human nature, openness of truth does not get exhausted merely in positing and creating. It has a reverse, seemingly reverse, rhythm of *concealment*. Truth is not only expressive, it is also suppressive. It not only reveals our experience, it also conceals the same. Both the rhythm are equally transparent. Language is a *play* of expression and concealment. Its primordial form is poetry.³

Both in creating and concealment man throws himself out in something else, executes a project, and clears up (one might say) a road-blockage. In other words, the awareness of motivation, initiation, execution, and internal opposition to what is to be executed are all simultaneously present. Linguisticity of experience has an internal dialogue of its own. Every artist is internally engaged in a dialogue before and during the execution of his project of aesthetic creation. The point may be made clearer in the following way.

Language brings man out in the open. Note what is being said, viz., 'Language brings man out . . .' and *not* 'man brings out through language...' In the process it, i.e., language, encounters an opposition. The opposition is evidently due to man, the ambiguity of his being. Even when overcoming the opposition, Being is brought out, there is an element which one feels has been left behind. Consequently, linguistic expression has always a sense of inadequacy in it. Absolute clarity is a tempting myth. There is another aspect of this inadequacy. What is brought out is intended to go beyond, for it is essential in the nature of a project. Yet it cannot go beyond the extent it is destined to. Again this duality of the inadequacy is a proof of an on-going and in-going dialogue of man-in-language searching truth and executing project(s).

Surprisingly enough, this limitation and this human projection of language are evident even in their most clear and positing case, i.e., the case of *naming*. What is named is not primarily out there in space. Naming, to start

with, is a self-presentation. Self-presentation is first approximation towards naming, e.g., approximation of man to Man, approximation of specific moments of life to Life. A name is intended by one to be acceptable to all, one's self-presentation as everyone's and thus to be 'logically' proper. Nominatum or the named draws out the name as self-presentation of man's consciousness. And yet it fails to reach its objective, the destination, the object purported to be properly named. Being-in-the-world, strictly speaking, knows no logically proper name. It is only aimed at. What is achieved is no less precious 'a continuously shining phenomenon' shining towards something else, that which is named.

The fullness or the success of language in use is to be gathered most clearly from poetry, where naming expressions function at a low web. Language, Heidegger maintains, in its most primitive form is poetic. The great epics of the world are the first, not only literary but also oral expressions of man's awareness of his situation in its entirety and complexity. Poetry is not merely decorative or ornamental. Thinking (*Denken*) goes into making it possible. At the same time, style, form or diction (*Dichtung*) brings life into it. Like other forms of life, the life of poetry has its structure (carved out of thought) and its power (derived from diction). The common feature of thought and diction, two aspects of poetry, is construction or building. Etymologically speaking, the languages rooted in Sanskrit also show the affinity between poetry and thought (taking philosophy as its paradigm). Both *Kāvya* (poetry) and *Cintan* (thinking) show the common feature of *Racanā* (creative construction). It would be wrong to think that man creates only in poetry and captures or pictures reality in thought. In both cases, whatever he conveys is a construct of his, and he derives its materials from within, and that interiority is placed before the world at large. In other words, man as a creator 'be he a thinker or a poet' creates as a part and citizen of the world.

Language bestows on man immense powers, namely, of distorting and destroying the past world and the present world, the worlds of others, of creating a new world, of dominating others, of expressing himself, and of communicating with himself and other selves. In none of these powers language behaves as a tool or instrument. The phenomenologist discards the instrumentalistic notion of language. It is not a question of discarding a theory. Heidegger's view of language, he claims, is the true description of what language is and how it works. It is from its *how* that its identity, i.e., *what*, is to be gathered. It is against this background of the nature of language that one has to understand Heidegger's view that poetry is created primarily *in* words and not *by* words. Poetry is conceived in the womb of language; it is therefore said to be an 'aboriginal expression' of language. Even more striking to note is Heidegger's view that language makes poetry possible. It breathes poesy into the life of poetry. Ordinarily, we are accustomed to think that it is in and through language that poetry becomes possible. Heidegger reverses this process of understanding the nature of poetry. His

logic is this: Man pours himself out first in language; language derives its immediacy, delicacy, moving power, rhythm and all from the very nature of man. It is no surprise therefore, that its articulation will take the form of poetry. It is for this reason that the words of pathos-stricken Vālmiki, uttered spontaneously, almost effortlessly, acquire a true poetic ring. But hidden behind the poetic spontaneity lies the long and deep dialogue for creation. The First Poet did not exactly know that his words were poetic and going to be the beginning of an epic. The temporality of creation conceals from the creator its totality. Every poetic beginning is a venture into an endless creative journey.

It is because of his nature that man gains, in and through language new experiences, stores and creatively deploys them, those endlessly new experiences. Because of his world-orientation or world-situation, what man creates turns out to be sharable by others. The poet brings into being (in a sense) what is not there and yet makes others share it with him. This is due to the foundational character of *Mitsein*. Essentially all men are poetic and musical in their disposition. If some of them seem to be impervious to the influences of *poetry* and the *muse*, that is their willful obduracy which is bound to prove more or less unsuccessful in the end.

Language is such a solid foundation of the species-man that it enables him to be a successful dealer not only in ideas but also in dreams and miracles. That thought is easily sharable with others ordinarily needs no elaborate explanation. The representational forms of thought more or less ensure their common sharability. But, as Heidegger points out, that is only the surface aspect of the common sharability of thought; the other and the deeper aspect of it is Being where poetry lies hidden and inseparably bound up with thought. Being invests human beings with a subtle, yet very powerful capacity to understand and communicate with each other. Both thought and poetry reveal their common root, namely, construction.

Even naming words derive their success from this ontological basis of language. According to Heidegger, words are not primarily referential. The referring capacity of naming expressions is rooted in the consciousness of man's nature. It is both individuating and identifying. All these capacities of naming words are sustained and nourished by man's consciousness, his ability to present before it simultaneously both names and nominata. The main function of words, says Heidegger, is to grant or give world to man — changing world to changing man. Words constitute the warp and wool of the fabric of the living world,—the world as lived by man. Man is situated in language, enveloped and motivated by it. One might even say that language uses man to bring the world home. Language has a life of its own. Undoubtedly, it sounds as a hypostatization. Perhaps it is. It is also a living and moving metaphor. The main purpose underlying this view of Heidegger is perhaps to highlight the human origin of language and the inseparable

character of man and language. Having a larger life of its own, language can successfully use man to grasp the world and uphold it.

There is a dialogue between language and man. Language uses man to recreate the world. Man uses language to organize and re-organize the world of which language itself is a part and in which man himself is situated. For example, when man says something, he wants to show it. *Saying* is a sort of *showing*, cutting out a slice from the whole and drawing one's own and others' attention to the said.

Another way of bringing out the essence of language is to highlight its representational or conceptual character. These representations enable man to grasp things of the world closely and reliably. But because of the human root of the representations they keep on changing—changing all the time,—changing due to time. It is one of the reasons why representations must not be confused with pictures. Language can have in it only representations but not pictures of the world. The world cannot present to itself its own picture. Representations of the world in language are never picturesque. Again, that is due to the inevitable presence of man in it. Man's concealing work can never be totally suspended.

Yet language in a sense succeeds in representing the world. For it is a dynamic sustaining power of both complementary and opposite natures of the world. For Heidegger the basic natures of the world are indicated by four living symbols—the Earth, the Heavens, Men, and Gods. It is the human foundation of myth, metaphysics and science which shows their unity in language. Or one might say, it is primarily language which brings the said four worlds together. The seemingly unlike worlds are brought together soundlessly and silently. Language, like proper name, is a silent pointer. But it does not function exactly and through ostension. It functions through man. Man functions through it. So, the concept of logical propriety of naming expressions has to be taken with a pinch, if not a lump, of salt.

It is again by highlighting the *intimate* relation between man and language that Heidegger says that man speaks language as well as hears it. Man-language relation is a dialogue in self-presentation and self-re-presentation. Placed within language, man *speaks* language. Being a part of language, man *hears* language. And, therefore, man's hearing and speaking correspond with each other in the Heideggerian fashion. One might say that this correspondence is co-response. What it means is this: hearing responds to speaking, and speaking responds to hearing. For both the phenomena are meaningful within the life of language itself. Language is a most basic, moving and living event; it is expression. This expression is expression of not only cognition, certainly not primarily of cognition, but also of emotion and volition. Thus through the phenomenon of language man gets himself back to the world wherefrom he comes out. Language is man's way of getting back to himself. Poetry is its most basic artistic form.

Artistic creation is an adventure into existence. It is a venture of Being

into what is beyond itself. This adventure or venture takes the creator—be he a poet or a thinker—out of his protected shell or routinized life. One might say that is a sort of opening up, an exposure to what is unexplored. In every creative work man takes himself out to an unprotected, unshielded, i.e., open, area.⁴

When a poet composes a poem he uses a language in a new way in order to re-create something already available to him. The new theme which he wants to create is not within him. It is out there—a creative possibility. But even as a possibility it is powerful enough to draw him out—out of his routine life, common perception of life, and used ways of language. The compulsion of creation while taking the poet out of his own home, wherein he has lived long, cannot yet overcome a resistance, that holds the poet back. His tradition, used forms of life, including idiosyncrasies and eccentricities, do not allow him to go beyond a given system of life to which he is deeply affiliated. This system exerts a gravitational force on him.

Thus it is interesting to note that every creator works under two contrary forces, one drawing him forward, and the other holding him backward. Creation is work under tension, maintaining a sort of balance between forward push and backward pull. Strictly speaking, what is clear in the life of a creator or a poet is also there in the life of every man. Being in general and beings in particular live under the crossfire of remaining and becoming.

This is so because of man's very nature. As we have noted earlier, man is open—open to new ideas, ideals, influences, and many invisible subtle forces. The openness of his nature is a standing invitation to these new forces. True, man has a home of his own wherein he dwells. But its doors and windows are very large and always open. Its walls are very thin and porous. Consequently, the interior space of man's own being and its exterior environment are continuous, always in touch with each other. By opening himself up to both exterior and interior impulses the artist as creator enriches his resources for creation. The 'exterior' and the 'interior' merge into one in the world. This large world often remains unlived or inadequately lived. By living it even more deeply, the poet or the painter becomes increasingly free.

Strangely enough, this freedom is a risky achievement. For over the brims of freedom the resources of the creator tend to spill over and go waste. For creation, it is clear, the creator needs non-routinized new resources. In the process he enlarges his horizon of freedom. But having acquired larger areas of freedom, uninhibited by any concealment, he finds himself placed in a predicament, a state of risk. Freedom presents to him a new problem—the problem of holding back, preserving what resources he has already acquired. This looks like a paradox. Rightly understood, it is not so. It is a *dialogue*. It is a dialogue between man-for-himself and man-for-otherselves. These two poles interpenetrate into the heart of the creator. He has to preserve what he has. For preservation he continuously needs replenishment. For replenishment he has to open himself up. When he opens up, new impul-

ses, influences, and even compelling forces enter into him. At times he fails to internalize, still less assimilate them; the creator feels like closing his doors and windows. In fact, however, he fails to enclose himself totally into his exclusive shell, excluding the world. Being-in-the-world, because of his very nature, cannot exclude the world. He cannot run away from himself. He cannot jump out of his own skin. In brief, the dialogue between the open and the closed in human nature is both engaging and endless.

This description of the creative man needs some qualification. This is due to some alien influences. Though openness and lustre are the very native characteristics of human nature, they often get dusty and soiled. Threatened by the dimming of its lustre, human nature wants to arrest its own deteriorating position. It *wills* to stop the rot. Willing is a sort of *assertion*. Assertion entails *self-concentration*, and as man concentrates more and more on his self he is bound to be more and more indifferent to other selves. He becomes increasingly impervious to outer influences. Thus his self-preserving will entailing self-concentration turns out to be responsible for the reduction of the lustre of his self. The will which is supposed to preserve the lustre of the self starts taking it away. This is indeed a paradox—a tragic paradox—in the life of the artist in the contemporary world. It is *not* a creative dialogue. What we call 'the tragic paradox of our time' was perhaps always there. The difference is that it is becoming more and more poignant. The poignancy is felt most acutely by the artist, the painter and the poet. The dancer, the singer and the litterateur also belong to this category, because all of them are open to the subtler forces of the time. They can easily grasp the tragic spirit of the time more poignantly than the rest of us. They suffer more than us and create more than us.

In contrast, we refuse to suffer. At least we try to reduce the level of self-suffering. Accordingly, we are in search of some protective device. We want to have some shield or armour around our person. We lean more and more on the machine called the State, and the devices called Science and Technology.

The State by its very nature cannot, and, therefore, does not, provide one the sort of protection that one gets at one's home. The home of the artist, we have already noted, is more roomy, spacious and unprotected than ours, the home of the average man. It is no surprise that he feels more uncomfortable, oppressed, almost suffocated, under that huge institutional umbrella. One's affiliation to a particular State depends on one's will.

Ordinarily, an artist, without compromising his creative quality, cannot will to subordinate his will to the impersonal will of the State, for the latter's main concern is law and order, protection and prevention. Not that creation and innovation can never be its major occupation. But, then, such a State, very unlike the states we live in and see around, would be extremely humane, unusually open, itself a shining work of art. There artist would be at his best, freest, totally unprotected, and in his most responsible and powerful form.

And he will not feel like expelling the politician from the State, for none or nothing would pose a threat to his unshielded creative venture and existence.

Nor is science, another very powerful and 'impersonal' institution of our desolate time, a threat to the artist. Self-asserting State and Science, even in their aggressive postures and moods, cannot soil the shining self of the poet. For his language—idioms and themes—is beyond the ken of their touch and apprehension. To the State, the artist does not exist except as a babbler, an idle talker. 'Idle', because the artist does not talk in terms of law and order. His rhythm and harmony are open and breakable and not to be confused with prohibition and prevention implied by statecraft.

Artists' idioms are distant also from scientists' laws and theories. In search of order the scientist imposes an order on the world and then asks it to say 'yes'. The scientist is an impatient seeker of orderliness. Well before order shines in and through law and theory, he produces them before the test-tribunal of experience, tailored and abstract experience. The scientist is a spectator and organizer of experience, interrogating it all the time, trying to disengage himself from its charmed circle.

A word of caution is perhaps called for here. The deformity of experience through *will* that one finds in the State and Science are not inherent in them. It is peculiar to the time we are passing through. It was not there in the past when the State was not so powerful and all-comprehensive and Science stood close to arts. The present distrust of the openness of experience is 'rooted' in an unfounded sense of insecurity. The sense of security provided by Science and Technology is superficial and rests on a forgotten alienation of man from the real world. Hence one hears now very frequently the poet's words in the mouth of the ubiquitous ecologist: 'Back to Nature'. In Science man is seized of by an impossible desire, viz., to know the world face-to-face and to be sure on some abstract authority that his knowledge is conclusive, i.e., not open. The Self's search for cognitive certainty and its reliance on other's authority hardly go far together. Clearly the artist is at an advantage over the scientist on this point. He himself is his best judge. The next best judge is his own *chosen* audience. To minimize the dehumanization of Science as an institution it must try to get back its lost aesthetic image. The scientist needs to be reminded that he too is a creator and builder and not merely a discoverer, justifier or falsifier. Science is not there to take away man's natural lustre, his creative openness.

The locus of man's freedom is not to be sought where causal laws of nature are seemingly absent, e.g., in quantum physics. Freedom is not born in the womb of man's ignorance of or alienation from Nature. Freedom is to create, to be. Without abdicating his creative role man cannot allow technology to undertake all *ventures* on behalf of him. Man is the real venturer behind the ostensible ventures of technology. Rightly understood, techniques and machines are modes of being. It is this juncture one has to look at for

grasping the true relation between Arts, Science and Technology. This relation is marked both by a similarity and a difference.

The 'similarity' lies mainly in their aim to explore the world, to know and, if possible, live it. The 'difference' is primarily due to the scientist's concern with and the artist's indifference to law and theory. The artist's rules of creation are not law-abiding—at least not outwardly; his main passion is to practise and not to theorise.

The 'unruly' practice of the artist shows his daring, his fearlessness in treading the untrodden path. The greatness of an artist consists in his competence and courage to express himself and his world in new ways, without following hitherto known and charted paths. Thus he departs from the tradition he is born in and authors a new tradition. Since the stimuli and influences, the subject matter of his creation, to which his being is open are in a way inevitably grounded in tradition, his freedom from them is only partial. That also explains, in part, why his works can be appreciated by others, although the alchemy of his creative self transforms whatever it touches and his language, representation and depiction are so unique. Living as he does with others like him in the home of language, he allows it to use him in a very special manner. And that becomes manifest in his creation and lends it a definite character. The relations which an artist is obliged to enter into with tradition and language are such that even the most unique and daring of his creations is bound to be a re-creation. For, in the last reckoning, the being of the artist, like the being of others, belongs to the world, is situated in time, and is individuated by place. What is near him, his society, class, etc., has admittedly a greater say on him, but the voice of the totality, of Being as a whole, does not fail to evoke his creative response.

Though thus rooted in language and tradition, shaped by time and place, the artist never ceases to be free. On the contrary, these onto-sociological conditions form the *abyss* of his freedom. None, certainly not the artist engaged in intimate and extensive commerce with the world, can be free in a vacuum, in a contentless emptiness. Freedom is a sort of overcoming; there must be something—some danger, demon, problem, obstruction, inhibition or the like to overcome. It presupposes some encounter, with what is to be overcome. When the object of the encounter, danger or problem or whatever it is, is willed and well anticipated, the encounter is authentic and its outcome in the form of freedom is positively welcome. When safety is not solicited, nor danger avoided, freedom presents itself in its present form. The artist's freedom is of this kind. Creation demands of him the most transparent form of freedom. Not only does the censor or the ban of authority but also the intractability of the subject matter or imperfection in the execution of a project, even its very possibility, haunt him, disturb him and threaten his freedom of creation. Every bit of his failure, or what he regards as his failure, is the enemy of his freedom. His main enemy is within him and the encounters him mostly in his inner space. Plainly speaking, the artist is godly in his

quest for perfection. When he succeeds in creating or composing what he wants to with all his body and mind, he is the freest and happiest man on earth. His joy knows no bounds. The lustre of his self has not a single speck of dust in it.

Take the case of a form of Indian classical music, *māṅ sangit*, for instance. Though it might not have words in it, yet one has to understand it, grasp its meaning, not only its auditory sensuousness. In a sense, it is a play of pure forms, a sort of sonic mathematics, yet to render it properly, to convey properly its intended message or meaning, the musician has to work hard, very hard. For not only does he himself have to enter into what is meaningful but also he must try to enable the hearers to share it with him. Meaning conceals meaning. Every work of art, in this case music, properly executed, discloses ripples or waves of meaning, meaning after meaning. Continuing to hear the same music the hearer with a trained ear keeps on hearing different meanings, different shades of meaning, finely graded and grained. The musician, on his part, gets the burden of aesthetic feeling off his chest by expressing, by opening himself out. He becomes free and experiences the joy of freedom.

More or less the same thing happens in the case of poetry as well. Neither the poet nor the lover of his work merely *sees* the words used in the composition of poems. He *reads* them, loudly or silently. He reads them *through* and *together*. Words have in them hidden more than one magic. Of course, the magic of music is there. It is not merely a matter of rhythmic or harmonic hearing. The *rheo* (flow) of rhythm may be interrupted. Interruption may be so frequent and uneven that the very music of words may get lost to the untrained ear of the mind. The goddess, the Muse, who inspires the poet also makes all the hearers, including the poet himself, muse over the subject of poem. Thus our mind comes into the picture. Sonic sweetness, hearing, and kindness reinforce the understanding of meaning. The latter regales, further regales the ears. The togetherness of sweet sound and meaning of words discloses the second magic of poetry and its building materials, i.e., words. Like all magics, the magic of poetry conceals its true subject matter and projects something else instead - the 'else' that is somehow akin to it. After all poetry, like thought, is a sort of making (*Greek poesis*). Admittedly, it is an *outflow* of being, a result of being's opening up, but it is not wholly so. It is also a representation of man's-being-in-the-world, a use of being by language. Therefore, when the poet himself or a good reader reads a poem its concealed meanings, hidden suggestions, elusive nuances and the like start coming up and becoming clearer and clearer. Gradually a rapport is established between the reader and the listener. Even the silent reader listens to his own reading forming a virtuous and growing circle of fullness of meaning. Enjoyment of poetry, another magic of poetry, enlarges the world of freedom of all concerned, of the writer and the reader, of the reader and the listener, even of the thinker and the interpreter. Poetic thought and interpretation are the inverse of beautiful expression and

successful articulation. It is primarily for this reason that Gadamer, following Schleiermacher, says: 'hermeneutics is a kind of inversion of rhetoric and poetics'.⁵

Embellishment as such is no embellishment. It is organically, not adventitiously, related, to a work of art. Creation and embellishment go together. It is not as if that the work of art is first executed and then embellishment as exterior decoration is added to or imposed upon it. It must not be taken even as interior decoration. In the very act of the conceiving of a poem, the poet creates it *beautifully*. Beautifying forms are not subsequent or dispensable adjuncts. The meaning of a poem and its form are not separable; the form constitutes its meaning. The meaning of art is like the petals of a flower. They are of the same kind, yet their difference is unmistakable. Petals are spread-out meanings, beauty and fragrance, of the flower. By reading and re-reading a poem one gets into its deeper and deeper meanings, delicate shades of meaning; just as by looking at, by getting totally absorbed in the contemplation of a flower one can have different, gradiently different, perceptions of beauty, purity, elevation and the like.

NOTES AND REFERENCES

1. Martin Heidegger, *Being and Time*, Tr. by J. Macquarrie & E. Robinson, Harper & Row, New York and Evanston, 1962, Sec. 29. See also, Sections 31 & 34.
2. *Ibid*, Sections 32 to 34, See also Sections 158-160 & 219-225.
3. Martin Heidegger, *Pathy, Language, Thought*, Tr. by Albert Hofstadter, Harper & Row, New York, 1971, pp. 95-96. See also, pp. 114-28.
4. Martin Heidegger, *On The Way To Language*, Tr. by Peter D. Hertz, Harper & Row, San Francisco, 1971, pp. 70-72. See also, pp. 112-111, 132-131, 159-61.
5. Hans-Georg Gadamer, *Truth and Method*, Crossroad, New York, 1982, p. 166.

Enlightenment Communication and Silence

I PROPOSE to discuss in this paper (a) two different models of Enlightenment, the Buddhist and the European, (b) their comparability and difference, (c) the possible forms of the communication and the sources of "enlightenment," (d) the doubts and arguments raised against (c) and their grounds, if any, and, finally (e) explore and examine the claims of silence as a mode of communication of the supreme "enlightenment".

I

(a) Though, *historically* speaking, the Buddhist model precedes the European for *conceptual* reason, I propose to delineate the latter first. The essence of the European model, as I see it, is rooted in the Platonic view that Reason in its pure form can truly and infallibly grasp the whole of reality, all its nooks and corners, without a remainder. This robust optimism, both in the power of reason, one might say, turns out to be more speculative and less empirical at the stage of its self-formulation. But, to be more cautious, one must recognise, particularly in the light of the available accounts of the Platonic period, that the scientific findings of the time did not prove incompatible with speculative sweep of Reason. Plato's formulation of Reason is such that its ability to grasp reality may only be temporarily disturbed by the blemishes of will and emotion but can never be essentially impaired, still less destroyed. Expanding this formulation one could, in fact, some actually did, argue that rational speculation is the forerunner of the possible empirical findings. If the two are found incongruent, the precedence, so runs the argument, is to be given to the speculation of Reason over the findings of "disturbed" sense-experience. Mainly influenced by the writings of Aristotle, Thomas Aquinas in the 13th century tried to interpret the master's views, which contained a lot of Platonic optimism and, in addition, an unflinching faith in an all-pervading teleology or design, in such a way as to bring them in line with the prevalent and influential Christian view of life. In the process, Aquinas aimed to achieve two things,—to purge Christian religion of all pagan influences and, at the same time, to curb the excess of rational optimism traceable to the Pythagorean-Platonic philosophy of mathematics.

The period of Renaissance is marked by a liberal re-look at their Hellenic past and its diverse cultures, e.g. Platonism, Stoicism and Epicureanism. It is an interesting and crucial cross-road of the European civilisation and culture. In the intermixture of different cultures, representatives of the different aspects of human personality, of head and heart, the objective historian does not find one-sided preponderance of any single ingredient, scientific or artistic. Looking at the Renaissance picture of the European culture one might rightly affirm that it represents the *richness* as well as the *ambiguity* of the total man, a very beautiful and yet a delicate balance between such finer expressions of his being as literature, music, fine arts, on the one hand, and a noble longing for philosophical insights, scientific truth, and mathematical formulation of the same, on the other. Though interesting and beautiful, this mixed picture did not last long. Before long it was replaced by a picture the main characteristics of which are mechanical structure of nature and the supreme suitability of mathematics to describe it. This mechanical-mathematical orientation of the late Renaissance period was essentially triggered off by the helio-centric hypothesis of Copernicus. Very conscious of the religious sensibility of the period, Copernicus, unlike some of his persecuted successors, was prudent enough not to press for the *descriptive* content of this beautiful mathematical *hypothesis*. It was said on his behalf with his silent approval that it was only a "beautiful mathematical hypothesis" in order "to save" largest available astronomical phenomena and *not* "a true description" of the universe. The matter, however, was not allowed to rest there for long.

Under the influence of Bacon, who was somehow suspicious of the claim of infallibility of mathematics and the inductive methods propounded by him, some people started believing (a) that the mind can be purged of all Idols, i.e. blemishes and prejudices, and (b) that with that clean mind—clean mind alone—it would be possible for man to read correctly, i.e. scientifically, the Book of Nature. The Book of Nature is the first and most important book to be read for attaining the highest possible knowledge. Following a different route, marked by initial scepticism, Descartes also reached the same conclusion, viz, that the Book of Nature can be clearly and distinctly, i.e. scientifically, read only by the grace of *veracious* or non-deceiving God. The Baconian and the Cartesian ways of reading Nature or making science possible would not have impressed the European mind very deeply if, at about the same time, Galileo had not appeared on the scene demonstrating the revolutionary results of the application of experimental methods and also the representability of the same in the language of mathematics. All these moving spirits of the European renaissance—Copernicus, Bacon, Galileo and Descartes—willingly or unwillingly, at least in some cases unwillingly, were called upon to read and decipher simultaneously two seemingly unrelatable, if not incompatible, books—Nature and the Holy Writ. The result was the emergence of Naturalism, on the one hand, and Deism, on the other.

Even the great Newton could not completely get out of this dilemma. After proving, by prodigious mathematical reasoning, the law of universal gravitation, he felt distressed to find that some mysterious irregularities were still left, begging for scientific explanation. He was honest enough to recognise that without the *external* intervention of God he did not know how to bring in line those mysterious irregularities with the law of gravitation.

Apparently, this pro-empiricist stance of Newton annoyed another great contemporary scientific philosopher, Leibniz, who affirmed that everything, big or small, of this universe has its reason and that nothing is irregular. He tried to defend his affirmation in terms of his notion of an all-powerful, all-knowing and all-good God and the Law of Sufficient Reason. Whatever is has sufficient reason behind its possible or actual existence. And the world we are situated in is the best of all possible worlds.

Leibniz's view is the *high-water* mark of the theistic spirit of the age of Enlightenment. It rests on a boundless rational faith in man's ability to know truly the world of God. Extending the argument of Leibniz, Wolff desperately tried to prove that human mind is free from all incapacities, natural and moral, and consequently, man can not only acquire true knowledge of the world and of man but also be perfectly moral. In the Wolffian world of German Enlightenment, there is no darkness but only light, nothing evil but everything good.

But it may be said that this ultra-optimistic picture of the individual and the world did not go unchallenged. The critics were mainly of two sorts, Rousseau-like naturalists, who maintained that nature is intrinsically good and does not owe its goodness to any Beyond principle, and Grotius-like jurists, who discovered, following the cues provided by Greek Stoics and the Roman notion of *jus naturalis*, that the nations of the world, separated by space, ethnic characteristics, language etc., could be brought harmoniously together under a common set of International Laws. There lay the way to resolving war and conflict that afflicted the world, and of establishing peace and amity. These jurists did not find the world they actually lived in a happy world.

Locke's influence on the spirit of Enlightenment was one of the sobering variety. Admittedly, he, as he said himself, 'as deeply under the influence of the Newtonian world-view. But the cultural upshot of the latter, i.e. the boundless faith in the capacity of reason, was found, on epistemological scrutiny, unacceptable to Locke. He clearly denies the availability of knowledge of substances. Only the experienceable primary and secondary qualities, he declares, can be known. However, without raising doubt about the existence of the substance, he commits himself to the realist world-view of Newton. His attack on the Cartesian innatism was aimed to achieve two things simultaneously,—(a) sobering the extravagant claim of reason to know every possible thing, and (b) to question the innate depravity of human nature. Unlike his countrymen, Butler and Shaftesbury, he tried to bring, whenever

possible, the question of morals closer to the laws of the constitution based on civil justice and those of science, and thus delinking it from the anchorage of unquestionable "conscience" or "moral sense". It is interesting to note that Locke, who defends Newton's rigid mechanical picture of the universe, passionately wants to carve out spacious room for the freedom of the individual in society. This was considered seditious at that time. It was regarded as an open call against the *despotism* of the Stuart King of Britain. In the Lockean world-view (a) the sovereign sway of natural laws and (b) unbartarable freedom of the individual went together.

While Newton and Bayle felt overwhelmed by the thoroughly law-governed character of all natural phenomena, Grotius and Montesquieu, the latter under the influence of Locke, Harrington and British constitutionalists, were searching for laws that could define ideal inter-individual and international relations while preserving the maximum possible freedom of individuals and nations. Almost re-echoing Locke, Montesquieu declares, "Liberty is a right of doing whatever the laws permit". But, according to him, positive or man-made laws are based upon those of nature. His version of social contract is intended to vindicate simultaneously (a) liberty of the individual and (b) primacy of the laws of nature. Obviously, this was not an easy task. To prove that the *necessity* underlying the processes of nature and that governing human freedom is identical at bottom turned out to be a hard and difficult task. Spinoza took to one extreme line leaving the other to be espoused by deists and the British theorists of moral sense.

The leading spirits of the European Enlightenment were working under some basic perceptions which did not prove easily reconcilable. First, they all sincerely believed that scientific knowledge based on experimental reasoning and expressible in mathematical language had to be taken very seriously. Secondly, deeply impressed by the law-governed characters of the universe, they were earnestly, almost desparately, searching for similar, at least comparable, set of laws in the realm of human society. Their second concern invited some basic difficulties for them. They could not see how exactly the paradigm of scientific lawfulness could be transferred to social life without seriously impairing the ideal of individual freedom,—the ideal which many of them, especially Locke, Montesquieu and later on, Rousseau, seriously defended as the most powerful argument against despotism. In the process, all of them, of course in different ways, found themselves caught up in similar problem or dilemma. Montesquieu, for example, discovered that man, as a physical being, like all other bodies, is subject to *invariable* laws of Nature, the laws created not by him but by God, and, therefore, perfectly knowable to him, and that the laws authored by men themselves are only *possible* laws, as distinguished from Nature's *necessary* ones. Natural laws are fixed and not open to question and revision, while the positive laws of society are open-ended,—open to correction and improvement. "This is", says Montesquieu, "because, on the one hand, particular intelligent beings

are of a finite nature, and consequently liable to error; and on the other, their nature requires them to be free agents. Hence they do not steadily conform to their primitive laws; even those of their own instituting they frequently infringe".¹ Thus Montesquieu, we find, wants to make a virtue of Man's finitude and fallibility. This is the line of reasoning he pursues to reconcile the mechanical, fixed and knowable frame of natural laws with the variable and partially knowable frame of man-made laws. Like many others of his age, he wants to show the harmony, at least in principle, between the free agency of the individual and the unquestionable authority of science based on its proclaimed knowledge of the laws of nature created by God.

Some thinkers like Voltaire maintain that Spinozism is a direct outgrowth of Cartesianism. To the Cartesian, God is nothing other than the immensity of things, whereas, to Voltaire, Newton's philosophy is essentially theistic. God's existence in nature,—in vacuumless matter—is ascribed by him to a sort of final causality. The world is a watch. God is the supremely intelligent maker of that watch. Voltaire's notion of God evidently underwent significant changes over the years. At one stage he appears to have endorsed the boundless optimism of Leibniz and Pope. Later on, in the face of the atheistic arguments and having experienced himself the existence of evils in the world, e.g. the devastating earthquake at Lisbon in 1755, he retreated from that position. Ultimately, he was obliged to fall back on *faith* and *necessity* as grounds for the finite man's belief in God. Caught-up in the cross-fire of Newtonian determinism and Lockean libertarianism and, given his own native inclination to defend liberty, he was badly in need of justification of this principle. The only credible justification he could think of was the *immediate testimony of consciousness* which, interestingly enough, is, on his own admission, impervious to all theoretical and scientific objections. Evidently, he pushed the frontiers of faith too far.

Voltaire's dilemma, questions, and changing answers are symptomatic of the spirit of the Age of Enlightenment. His passionate efforts, like those of many of his contemporaries, to apply the laws of nature to the study of society and history substantially ended up in failure. Out to vindicate the *law* of progress, he had to remain content only with an ambiguous defence of what may be called the reign of reason. Unless the concerned individuals are guided by the light of reason and refuse to submit to animal passions, Voltaire ruefully observes, the hoped-for historical progress, at the instance of God, is not possible. God does not directly intervene in the process of history. For individuals easily submit themselves to the dictates of passion and make it impossible for God to bring about that progress. Thus they indirectly pave the way for the enlightened despot to rule over them, at least for the time being. He ridicules Rousseau's ideal of natural equality of all men. Despotic interludes of history eclipse the vision and hand of God in history. Clearly, this view marks a sharp departure from Leibnizian rationalism and cosmic optimism.

The story of European Enlightenment is bound to remain incomplete without any reference to the *Encyclopaedia* (1751-80) edited by Diderot and d'Alembert. Because of the diverse and, at times, even conflicting intellectual persuasions of its contributors, the *Encyclopaedia* exhibits no homogeneous character, except in a very broad sense defined by a general scientific temper and progressive political orientation of the time. While Voltaire, one of the contributors was a deist, d'Holbach, another contributor, was a materialist. Diderot and d'Alembert themselves were opposed to the Church and revealed religion. But Montesquieu, who also contributed, was, as I have already mentioned, a firm believer in God.

Diderot admittedly is not a systematic philosopher. He wants to reconcile two irreconcilable theses,—reductive materialism and ethical idealism. The later is perhaps to be explained primarily in terms of progressive political ideology and its underlying human psychology. This might remind one of Hobbes' influence—both of his materialism and liberatarianism—on some of the Encyclopaedists. Needless to add, Hobbes' thoroughness and consistency are conspicuous by their absence in the writings of the former. Unlike Diderot, d'Alembert is deeply influenced by Locke's scientific philosophy. He aims at unification of all sciences following a sort of Cartesian method. His *metaphysical* anti-essentialism has often been characterised as a forerunner of positivism. This approach explains his concern to separate ethics from theology and metaphysics. In spite of his strong scientific orientation, it would be wrong to think that he is a materialist. Like Diderot, he also believes in the historical law of human progress characterised by social reform and moral enlightenment.

Some of the leading lights of the French Enlightenment like Helvetius, Lamettrie and d'Holbach are undoubtedly anti-religious and materialist. But from this it would be wrong to conclude that other forces, including the anti-materialist and pro-religious, were not in operation. In fact the dominant spirit that pervaded the ideas and ideals of the French Enlightenment was rooted in (a) a faith in an overall historical progress with scientific progress as a part and piloting force of it, and (b) a resistance to dogmatic and speculative views regarding the nature of ultimate reality. The age encouraged the spirit of question and protest. The moving ideas of the time were not consciously authored to prepare the ground for the forthcoming Revolution. The French Revolution was an unintended effect of the French Enlightenment, especially of its spirit of questioning faith in historical progress, the theoretically useful legal fiction of human equality in the state of nature, and a general protest against despotism.

The extremely influential scientific-mechanical *concept of Nature* developed in the previous two centuries in Europe presented itself to the protagonists of the Enlightenment in two different, but not *entirely* different, ways. Or, one might say, the same concept was being deliberately interpreted, broadly speaking, in two different ways in order to buttress different ideo-

logical ends. Different interpretability of the "identical" theme is itself a very interesting theorem of hermeneutics. Though it is claimed, and perhaps with some justification behind it, that Descartes succeeded in freeing philosophy, especially the underlying method of scientific inquiry, from its subordinate relation to dogmatic theology of the time, it is clear from the writings even of such persons as Descartes, Newton, and Locke that they were genuinely keen not only to carve out a place of honour for the concept of God in their systems but also to centrally relate it to their respective concepts of Nature. The views, mostly polemical, of such persons as Helvetius, La-mettrie and d'Holbach on the matter are admittedly daring and unorthodox; even then it is difficult to take the same very seriously. Both Locke and Montesquieu, as I have briefly tried to indicate, are engaged simultaneously in defending the *mechanical* concept of Nature and in vindicating the *freedom* of the individual and the State on the basis of some principles allegedly derived from Nature itself. The crux of the dilemma each one of them is called upon to face is: "How the mechanically law-governed Nature can possibly yield, with or without the intervention of an all-powerful God, the principles necessary for ensuring personal liberty and corporate freedom?"

Rousseau's response to this question,—an interesting emulsion of ingenuity, a native moral inclination, sentimental love for nature, and a fringe interest in contemporary science, —somehow arrests one's attention. He speaks of his respect for the scientific views of Bacon, Descartes, and Newton. This is perhaps an honest statement but need not be taken literally. For most of his major doctrines are not related to, or are influenced by, the scientific principles propounded by the said masters. He does not appear to have even made a sustained effort to study seriously their thought. On the contrary, he has so many things to say in criticism of the baneful effects of modern arts, sciences and civilisation.

Rousseau squarely blames the growth of science for promotion of baseless scepticism, pernicious national chauvinism, political despotism and even religious bigotry. He observes: "Our minds have been corrupted in proportion as the arts and sciences have improved".² To him scientific growth is due to "vain curiosity", astronomy to "superstition", and moral philosophy to "human pride". "Thus", he concludes, "the arts and sciences owe their birth to our vices".

The weakness and the eclectic character of Rousseau's thought become clear when one examines his major doctrines propounded in other works. If his admiration of, and eulogy for, the so-called simple life of Nature is so well-founded, it is difficult to endorse the central argument explaining and justifying the contractual transition from the state of natural society to that of civil society. His strictures against the Hobbesian view of pre-contractual natural society as "nasty, brutish and short" loses much of its thrust once we recall his idyllic view of the natural society. If it was really so idyllic, it is hard to understand Rousseau's half-hearted advocacy for the establish-

ment of civil society through the instrument of social contract. If men were naturally so good and there was no original perversity or sin in their nature, one is forced to ask: "What was it that goaded them to come out of the natural society and establish the civil society so easily corruptible by the advancement of arts and science?" In response to this kind of criticism he is obliged to draw a distinction between man and the brute, saying that while the former has, the latter lacks, the faculty of *self-improvement*. Having heaped so many good qualities on the man of the natural society, he admits later on that his improvement and perfection are impossible outside the civil society. By implication he concedes that organised society, though deficient in many respects, is superior to the natural society and provides opportunity, at least in principle, for human perfection. If in practice man could not reap the fruits of Social Contract, argues Rousseau, it was due to the establishment of the institution of *private property* leading to *inequality*. "All ran headlong to their chains in hope of securing their liberty; or they had just wit enough to perceive the advantage of political institutions, without sufficient experience to enable them to foresee the dangers".³ Rousseau's theory on the origin of private property and inequality bear, in many respects, the traces of the views expressed earlier by Hobbes and Locke, especially the latter, and anticipate Marx's views on the subject. While the said two British thinkers are clearly in favour of private property—a primary good and concrete embodiment of individual's freedom and right,—Rousseau is opposed to it on the ground of its alleged non-egalitarian implications. Naturally, the question arises: Is the emergence of private property in the organised society inevitable, i.e. natural? If so, should it be regarded as a virtuous or vicious institution?

A comprehensive answer to this question is to be gathered from his works like *Discourse on Political Economy* and *Social Contract*. Analysis of the arguments of the said two works further confirm the view that Rousseau is a well-meaning, morally motivated, independent but eclectic thinker.

The eclectic impression that one gathers from the major doctrines of Rousseau presented in his different works can be substantially removed provided one is prepared to *interpret* his underlying theoretical intentions and ignore occasional excesses, rhetorics and sentimentalism. To say this is not to disrespect the "non-rational" and (to Rousseau himself) a very important aspect of his philosophy. The two main objectives of his philosophy are to defend the *natural freedom of the individual in the organised political society* and to provide the *foundation of a supra-national human order*. This twin objectives found favour with many of his contemporary thinkers and immediate predecessors, e.g., Grotius, Pufendorf, Leibniz, and Locke. Unlike most of them, it has to be admitted, Rousseau has looked into the theoretical details necessary to relate meaningfully individual freedom with the ideal human order, national as well as international. Like Grotius, he speaks of the basic importance of individual freedom. If necessary, for the preservation of this

freedom one should renounce one's citizenship and leave the land of his own birth. He wonders how people in general can be denied what is recommended for one. It is not difficult to point out the problem involved in working out the implications of this view. One's membership of any aggregative life, familial or social, involves surrender, in part, of one's own (notionally available) freedom. To tackle this problem, Rousseau is obliged to speak of a hierarchy of wills,—individual will, familial will, general will, will of all (of a nation) and will of all (of the world, i.e. of all nations). For understandable theoretical importance, writers mostly focus their attention on the general will (*volonte generale*) and the will of all (*volonte de tous*) and the distinction between the two. The former stands for the indivisible common interest and the latter for the common interest *qua* aggregation and expression of particular wills (of all concerned individuals).

All said and done, the general will is to be postulated as the source of the individual's political rights; for without the latter one is defenceless against the tyranny or despotism of the ruler. More positively speaking, it is only by obeying the laws grounded in the general will that the individual escapes the bondage of passion and appetite, becomes a partaker in the collective moral life of the State and, through this partaking, becomes truly free. This line of his argument in *Social Contract* clearly anticipates Kant's, and may, understandably, be interpreted as inconsistent with his accent on natural liberty of man as found in *Emile* and *Origin of Inequality*. Rousseau's attempted solution of the problem differs from Kant's in some important respects. While, according to Kant, true individual freedom squarely rests on the *rational* will of the individual which, rightly understood, is *universal* in essence, Rousseau's *general* will, notionally infallible, is actually realisable only in small states like the Swiss cantonnments and the ancient Greek city-States. Drawing a very important distinction between sovereignty and government, he maintains that the *necessary* locus of the former is people and the *contingent* locus of the same is government. Only when the people, with freedom fully secured and unabridged, can directly participate in the process of governance, is the government truly sovereign. In this case the subject-people themselves embody sovereignty and are the maker and sanction of all their laws. Being free co-authors of law, we cannot, morally and otherwise, violate it without inviting the enjoined punishment, which may be even death, and without incurring the wrath of God.

This aspect of his theory undoubtedly smacks of totalitarianism. But, read along with other extremes of his thought, e.g., natural freedom of the individual and the laws that God has inscribed in the heart of every man—laws that can lay the foundation of an international order, this interpretation, though understandable, is hardly sustainable. Elsewhere I have argued that this kind of criticism, of course in a less articulate form, may be raised even against Kant, that fierce defender of individual liberty. In fact the contrary pulls of Rousseau's major ideas and ideals, viz., love of Nature, its

orderliness and unity, freedom of the individual citizens, and the infallible source or sanction of law, places him in a predicament which reminds one of Plato before him and Marx after him. The rationale of the criticism, justifiable or otherwise, against all these "enemies of open society" merits careful examination. It is no surprise that Rousseau's eulogy of the general will has often been cited as the forerunner of Herder's nationalism, Hegel's statism and Marx's totalitarianism and the beginning of the transition of the Enlightenment from the rationalistic phase to the romantic.

The crux of Rousseau's dilemma, the dilemma that any one who is wedded simultaneously to the ideals of collectivism *and* individual freedom (or who finds the former as means to the latter), may be formulated in this way. If freedom of the individual is not grounded in, and sanctioned by, the general will, it tends to degenerate into whims and caprices, likes and dislikes; and if the general will, the ground and sanction of laws making individual freedom possible and meaningful, is claimed to be a self-valid social mystique, regardless of the individual wills falling under it or, in a sense, constituting it, then the status of the individual freedom is seriously compromised, even if its claim to primacy may not get denied. Rousseau's way out of this dilemma is very ingenious. The general will is neither an aggregation of individual wills nor a social mystique. Because of its very nature, as shaped by God, the general will is available to every human being. God has given him "conscience to love the good, reason to know it and freedom to choose it". The general will is good will but, to recall the problem both of Rousseau and Kant, it cannot be identified with or construed as God's will without diluting the importance of the proclaimed autonomy or freedom of the individual will. The good is not *naturally* given; it has to be deserved and achieved by efforts of will, individual or collective. Otherwise, the rationality of the concept of organised political society and its underlying instrument, social contract, cannot be plausibly presented. In a sense, the goodness of the good will is "dependent" upon the goodness of the individual good will(s), and also the goodness of the individual good will is said to be "dependent" on conformity to the concerned general will. And yet, Rousseau insists, the general will and the individual will do not form a vicious circle. It is a circle but not vicious in character. Two halves of the circle are mutually complementary, invigorating and enriching. I must confess that this proposed solution of the problem does not appear very sound and convincing to me.

Something very essential seems to be consistently missing. Rousseau's main problem is undoubtedly fundamental and it deeply moves me. But I have an uneasy feeling that his effort to glue the said two halves of "reality" into a whole is primarily sentimental and not rational-and-yet-reverential, the characteristic I attribute to Kant's attempted solution.

Having sired several children out of wedlock, the sentimentalist in Rousseau did not hesitate to leave them identityless and then call his action "unscrupulous". I am not entering into the morality of the question. I men-

tion it only to highlight the sentimental character of the thinker as evident both in his life and thought. The Enlightenment needed a something both hard and loving to bind God and Nature together for the establishment of a society free, strong and durable.

Time and again, three *different* aims drew attention of the most of the leading thinkers of the European Enlightenment, who, in spite of being fully aware of their difference, tried to present them in a unified way. (a) The law-governed structure of Nature filled them with wonder and awe; (b) God's relation, if any, to this seemingly self-contained Nature intrigued them; and (c), given (a) and (b), the ethico-political implications of man's position in the organised political society and also in relation to the universe at large interested them. The Copernican Revolution stirred the mind of all. But only a few were clear about, and convinced of, its philosophical implications. Even those who, like Descartes, were so convinced, did not or could not move away from their theological moorings. To think of a *system* of knowledge without any place for God in it, a common place today, was almost inconceivable at that time. Called upon to explain this "puzzling" episode of the European history of ideas, we would be wrong to credit only ourselves with intellectual courage and honesty and deny them to the great minds of that age. Stray "swallows" like Bruno and Helvetius, however notable might they be for their intellectual courage, neither heralded the summer nor represented the spirit of the age *as a whole*.

The ambivalence—almost systematic in character—of the master minds of the 17th and 18th centuries appeals to me as sociologically interesting and intellectually educative. Spinoza identifies God with Nature, defines freedom by necessity and, thus, one might say, *dissolves* the problem or skirts the whole issue. Leibnizian Nature is so deeply permeated by the living-loving Christian God that one hardly knows where to draw the line between *natural necessity* and *divine necessity*, between *determinism* and *spontaneity*. Only a very discerning Descartes or a profoundly religious Kant honestly committed to science, feels torn and tossed by the contrary pulls of head and heart, of past and present. The Age of Enlightenment does not mean *all light* and *no darkness*. Most of its chapters, to extend the metaphor, are *grey*.

Rousseau's strictures against the tall claims of Reason indicate the changing character of the Enlightenment. In Germany, the French Enlightenment lost some of its old characteristics and assumed a few new ones. In the writings of Lessing, Herder, Goethe, Fichte and Schopenhauer these elements of the human nature, which do not readily lend themselves to "scientific" treatment, received serious attention and recognition. To dismiss them lightly as "shallow sentimentalism" or castigate them as beginnings of "narrow nationalism" would be wrong; it would almost amount to uncritical worship of Reason or the "newly found God", Science. It would be a grave error to forget that every age has its share of science and myth, images of illusion and reality. A serious lack of historical sense is responsible for this

cultural ego-centric views. Among those who tried earnestly to combat this misconception, Vico (1678-1744) and Herder deserve special mention. I deliberately refrain from mentioning the name of Bossuet (1627-1704), another historiographer of the time, because of his uncritical and, one might add, Augustinian insistence on seeing the process of history as God's book of pedagogy for the education of His human children. In contrast, both Vico and Herder draw our attention to the diversity and complexity of each age. Both succeed in escaping the self-complacency of the time, the naive belief that their glorious age was a natural outcome of a set of progressive laws of history. Though the then fashionable mode of presenting the details of history through some definite periods or cycles is understandably found in their writings, they are discerning enough to understand and describe the *unique* features of every age. What impresses me most about them is their recognition of the rationality of the primitive societies and their myths. That they managed to attain their refined historical sense in that age is a matter of surprise. I am reminded of Voltaire's concept of empirical history and Rousseau's concept of natural society in this connection. Like Science, History of the Age leaves two images of itself for us,—one primarily descriptive and the other primarily law-governed. Strictly speaking, history was yet to carve out an autonomous status for itself as a cognitive enterprise.

Once the uniqueness of every epoch of history is seriously recognised, the question of inter-epochal communication starts gaining its due importance. Though Vico's principal preoccupation in *New Science* (1725) is with the European epic, proto-historical and historical periods, he tells us *how* to understand the peoples of those by-gone days, their ideas and activities which apparently were so different from those of modern man. Vico's *New Science* is clearly different from, if not deliberately opposed to, Bacon's *Novum Organum*. The very emphasis laid on this issue is indicative of the inadequacy of the language of the triumphant science, marked by testable laws and mathematical formula, and also of the growing collateral realisation of the need of a new historical-hermeneutical language which must be responsive to, and expressive of, the *peculiarities* of the different periods. In fact, the second part of Herder's *Ideas for the Philosophy of the History of Mankind*, 1784-91, contains a criticism of Kant's *Idea for a Universal History from a Cosmopolitan Point of View*, 1784, for its failure to recognise the different historical stages of social order except in the very limited context of their alleged contribution to the development of the rational State. This criticism applies equally, if not more, to Hegel's historiography. Not quite free from the generalising tendencies of the time, Herder's attention is focussed on the recorded particulars of the cultures of the Jews, Greece, Egypt, China and India. He succeeds in freeing himself at least from the tendency of his "Enlightenment" contemporaries to despise the primitive, and he rejects the views that the primitive peoples had no culture of their own and that, deprived as they were of the supposed blessings of science and civilization of the 18th century,

their life was narrow, unhappy and miserable. If the gulf that is supposed to have separated the civilised from the primitive had been really there, they could never have successfully communicated with each other. The questions to be answered are: (1) Is the said gulf real or imaginary? (2) Assuming it is real in a sense, does it really keep the modern and the primitive separate? (3) If that is the case, do they communicate with each other? (4) If they do communicate with each other what is the mode of their communication? (5) Have we reasons to believe that there are different modes of communication?

Let me suggest answers, unqualified and very brief to start with. (1) The gulf is more imaginary—imagination resting on a particular ideal of communication—than real. (2) The assumption itself being questionable because of its pre-critical commitment to a particular ideal of communication, one is advised not to entertain the view that the modern society and the primitive society are separated by an unbridgable gulf. (3) They can and do communicate. (4 and 5) The available modes of communication, including different sorts and uses of languages, are numerous.

The substantive problem of communication between the modern and the primitive may be, in fact has been, raised, as I have indicated before, in another context. How to define the relation *between the causal-mechanical realm* of science, on the one hand, and the *free realm* of art, morality and religion, on the other? While the sciences, concerned as they are with the former, have their own, well-defined language(s), art, morality and religion, *somewhat* like history, have no distinct language of their own. I say “somewhat” because some pro-naturalist thinkers have been trying to re-construct history in the causal model(s) of physical science. Even of the earlier Kant (1765-66) it has been pointed out that he followed the method of moral enquiry which Shaftesbury, Hutcheson, and Hume had founded earlier. The method consists in first examining historically and philosophically what *does* happen and then in tracing its linkage to what *ought* to happen. In a way this was also the method previously followed by Rousseau. In brief, according to this method, the *ought* of human conduct is derivable from the *is* of human nature. It earned Kant from Hamann a dubiously complimentary characterisation as “the Prussian Hume”. In fairness to the said “pro-naturalism”, it must be mentioned that its proponents accorded a special position to the science of human nature, psychology, differentiating it from natural philosophy or physics that concerned itself with external nature. This paved the way for the idea of moral autonomy so passionately defended by Kant later on.

It can be clearly noticed that by 1780s Kant’s view on ethics and its relation to philosophy of science had undergone significant change. The concept of the autonomy of goodwill, the basis of ethics, captured his attention. Autonomy means the establishment of the unity of theoretical and practical reason, in which the latter is shown to be conscious of itself as the agent making the establishment of the said relation possible. Without cea-

sing to be subject to the laws of nature, the human agent is claimed to be capable of forming his free will and acting according to it. This capability is native to the nature of rational human beings and lays the foundation of the categorical imperative which informs us that *each one* of us can will a *form* of action, which is capable of becoming a *universal* law. The moral will of every rational being is intrinsically of such a nature that it proves to be *harmonious* with the wills of all "other" rational beings. This *fact*, to Kant, is of supreme *value* because it forms the basis of universal laws. "Why is it so?" is an inadmissible question in the system of Kant's philosophy. The supreme principle of value, the idea of universal lawfulness, is not derivable from any higher principle. Cassirer observes: "for here we have reached a point at which every question as to a further 'why?' must fall silent, where indeed it loses its meaning and its significance."⁴ Lawfulness or orderliness of Nature is the pre-supposition of all scientific enquiries and not their result. Similarly, the possible harmony between my will and that of others and among the divergent acts that I will, is the pre-supposition of our moral endeavours and dutiful actions and not their result. The orderliness of the world of things, determined in space and time and in accordance with the analogies of experience, the relations of substantiality, causality and reciprocity, present to us not only its unified structure but also, simultaneously, the structure of our understanding which makes it possible. In the understanding of the world of *things*, representation of *objects* is a necessity without which the power of understanding cannot articulate, and be conscious of, itself. Even this minimal *objective* constraint is absent in the moral world of free human beings, who, unlike causally related objects, form a republic of free subjects purposively united.

According to Kant, freedom from experience of spatio-temporal objects is not a gift of understanding. *Pure Reason* hardly discovers a new realm of knowledge unrelated to the representations of the empirical world which may lift us above its causal sweep. Besides freedom, freedom from the forces of natural world, we owe to practical reason the cues of using our ability to act independently of all promptings of sense, material motivations, and even self-interest. Kant himself tells us that his view on the matter has been largely influenced by Plato.⁵ The philosopher's spiritual flight from the archetypal sort of reflection upon the physical world to an awareness of an architectonic order that its teleological thrust has bestowed on it is an axiological enterprise in the quest of higher values. The experience of the Good embodied in the principle of morality, and religion has its basis only in the power of ideas and not in any natural or social cause. Like Plato, Kant confesses his inability to discover any external ground or cause of value-consciousness of obligation. The uncaused orientation of consciousness to values, e.g., pursuits of virtuous life and harmonious relation with all human beings, is ascribed to a peculiar power and excellence of will as purified and ennobled by reason.

Kant's argument is purported to show, among other things, that the rationality of human will is independent of the rationality or intelligibility of Nature. But viewed from another angle, the intelligibility of Nature owes its main characters to our understanding. In contrast, one's will does not owe its rationality, the ground of its harmony with that of others, to understanding of Nature, which is partly given and is partly a creature of understanding. In Kant's thought, beings and things have an ontological affinity. Intelligibility of Nature, defined in terms of synthetic apriori laws, and essential rationality of moral laws have a purposive affinity. But when we look at Schopenhauer's world-view, something more than affinity of will and reason presents itself to us. According to him, human will can carve out a sphere of its own operation in the world which is quite *independent* of the laws which govern it. In other words, behind and beneath its empirical or psychological surface the willing subject can give to itself its determinate essence once for all. Will becomes in this case a "thing in itself". It is given a transcendental status. Though transcendental in its self-existence, will informs human action. There seems a "mysterious" relationship between will and action. True to the spirit of Enlightenment, Kant wants to do away with his mystery and proposes to make it plain or intelligible. But one wonders whether Kant's proclaimed intelligibility of will is convincing or persuasive. Even then human will, as Kant understands it, is *sui generis*, i.e. a law unto itself. It is not presentably demonstrative. It is presentable only to the self by the self. An element of "in its self", a presuppositional character, is clearly there.

Elsewhere Kant speaks of "the inscrutability of idea of freedom"⁶ because of the impossibility of its positive presentation. So any "why?" is inadmissible in the area of freedom. It has been pointed out, e.g., by Cassirer, that here we are "trapped in a sort of circle".⁷ If we consider ourselves free, we place ourselves under moral laws in the pursuit of some definite ends; and if we say that we can be under these moral laws "because" of our freedom, evidently we are arguing in a circle. "Freedom and self-legislation of the will", to use Kant's own words, "are reciprocal concepts, and for that reason one of them cannot be used to explain the other and to furnish a ground for it".⁸ But Cassirer and others ask us not to get disturbed by this seeming paradox of theoretical reason. We are told that practical reason, reason in relation to will, knows no such paradox; moral consciousness faces no such problem; so the question of solving it does not arise at all. In brief, moral consciousness is essentially non-problematic and self-luminous.

In Kant's moral philosophy I find the high water mark of the Age of Enlightenment. As I have said before, the main spokesman of the Age tried to achieve three things, — (a) vindication of the then triumphant science, (b) review of human morals in the light of science, and (c) search for a just social order. Called upon to explain "What Is Enlightenment?" Kant makes

some very interesting observations. "Enlightenment is man's release from self-incurred tutelage. Tutelage is man's ability to make use of his understanding without direction from Nature". Kant's theory of moral freedom, delineated above, epitomises the spirit of Enlightenment.

But, unfortunately, Kant failed to anticipate the cumulative consequences of the three major doctrines of the Age. True to his own benign nature he "saw" orderliness everywhere, in the starry heavens (astronomical laws), in the moral impulses (moral laws), and in the universal stillness of Nature (laws of Newtonian mechanics).

One might say that in his eagerness to see the reign of laws everywhere he imagined and invented light of reason where it was not. Unlike Herder, he ignores the "disturbing" details of history. He refuses to recognise the importance of moral conflict. For, according to him, morality knows no conflict and wherever the so-called moral conflict is, it is due to the absence of moral laws. Occasionally, in his optimistic moments Kant recognises the *grey* fringes of reason, where the light of scientific reason does not reach or does not reach in abundance. His intellectual discomfiture is clear in two areas of his thought, religion and political theory. The religion that he saw within the bounds of reason is morally persuasive but hardly comforting to the spiritual urges of the religious soul. Secondly, he did expect much of the French Revolution. He thought it would usher in the Age of Reason in practice in the area of harsh politics vindicating the right of the individual and ensuring the rationality of the State. But the bloody aftermath of the Revolution shocked him very badly. And he must have realised the descent of the Reason on earth was not a very easy process.

II

Buddhatva is the Sanskrit word which in its meaning stands close to the English word *Enlightenment*. It is by light that darkness is dispelled and visibility made possible. He who attains the state of *Buddhatva* has no trace of darkness left in him and, positively speaking, can see "everything",—being, non-being and, becoming—clearly and infallibly. In the history of Indian philosophy and culture, "Enlightenment" is very closely associated with the name of Gautam Buddha, who is also known by such other names as Siddhārtha (literally, one whose purpose has been achieved).

We come across other kindred words in Indian thought, viz., *ātmopalabdhī* (self-realisation), *ātmajñāna* (self-knowledge), *ātma-sākṣātkāra* (self-encounter) etc. The meanings of these words, though similar, are not same. Figure as they do in the writings of different thinkers and systems, their intended meanings have to be gathered from the appropriate contexts. On the nature of *ātmā* (self soul) and the different conceived modes of its apprehension, e.g. realisation, knowledge, and encounter, there is hardly any

consensus among philosophers. Even the proponents of not-self-ism (*nairāt-mavāda*), i.e., the view that there is really nothing to be called self, are credited to have views on the nature of "self". The Indian tradition has a different story to tell about the ontology of the self than the European tradition. Still a few points of agreements or convergence should not be lost sight of.

The elusive nature of self has disturbed not only Hume and Kant but also the Buddhist and the Vedāntin. Both Hume and Kant, if pointedly asked, would, admit that in "one sense" self is not available, i.e., is not knowable, but in "another sense" it is, i.e., is knowable. The first sense is empirical: the self cannot be given as object. The second is transcendental: the self is given somehow, either as a presupposition or as a meaningfully connecting thread of disjointed moments of a sort of subjectivity. The first sense in which self is not cognitively available may be regarded, roughly speaking, scientific. Or, one might say, the object of science because of its very nature is a kind of construction and cannot therefore, be self or even self-like. Even the most robust realist is likely to hesitate to claim for the scientific object what is called *pure givenness*.

Construction or reconstruction of the given elements into an object is impossible without an "I think" principle. This may be of the Cartesian cognito sort or of the Kantian apperceptive unitarian kind. This may be like the Advaitin's *sākṣi-cetanā* (witnessing self) or the Sāṃkhya's *sākṣi-puruṣa*. Only one thing I see common to all these formulations of the "I think" principle. "I" of all such expressions as "I see", "I imagine", "I remember", "I think", "I have", "I have forgotten" and "I hope it will come to my mind again" is *essentially* (or, should I say, *functionally*?) same. Even forgetfulness is a presentable content of "I" or "I"-like individuated consciousness to which it can be re-presented again and again, at least in principle.

The scientific paradigm of object is quite unlike "I think" (as a cognitive state of awareness). Even conceding the force of the argument that every "I think" is at least partially *object-ified* in the sense that its reidentifiability and re-presentability is basically related to and dependent upon the object of "I think", one is logically obliged to affirm that it is categorially distinguished from the object which is partly given and partly constructed. The form of every "I think" is "I think of—" of some or other object, present or absent, perceived or imagined. But that point, in spite of its admitted importance, is hardly able to blur the line of demarcation between the irremediable subjectivity of "I think" and the paradigmatic objectivity of scientific object.

At times this demarcation is formulated in a different way and from another point of view. It is said that *science* is concerned, at least primarily, with the objects of *nature* connectable by *quantifiable causal laws*, whereas philosophy and arts with *freely framable* cultural activities and experiences which have *no fixed and firm linkages* between themselves. The realm of knowledge, *tattvajñāna*, has often been named also as the realm of *freedom*. Freedom

is a unique sort of immediacy of consciousness—not mediated, negated, or blemished by anything alien in nature to it,—by any *object*. The unique immediacy of consciousness just mentioned has been construed, broadly speaking, in two different ways: personally, i.e., as a property of an individual's awareness, and impersonally, i.e., as the very nature of reality itself. As I am trying now to clarify the concept without referring to-particular thinkers I do not want to name any one. But the views that readily come to my mind in this connection are those, of Śaṅkara, Bradley, and K.C. Bhattacharyya. It is the immediacy, and not the immensity (spoken of by Spinoza, e.g.), of being—of all beings—that is the hallmark of (otherwise indefinable) freedom. In freedom, in free union, all men are or become what is called Mankind. This is one of the highest aims of all cultures, at least of all the theoreticians of culture, irrespective of their ideological persuasions—pro-naturalistic and anti-naturalistic. For example, both Marx, a pro-naturalist and Sri Aurobindo, an anti-naturalist, maintain that the ideal of human unity is achievable only by free individuals and their free groupings,—free from *alien* or *objective* coercion.

Between law-governed Nature, on the one hand, and what may be called the metaphysical realm of Freedom, on the other, stands the expanding realm of Culture, a sort of *tertium quid*. The enlightened man is free man. In the twilight area of "normal" human culture freedom in its highest form, *buddhatva* or the character often attributed to the liberated soul (*vimukta ātmā*), is said to be unachievable. Aesthetic culture and ethical culture are admittedly marked by freedom, freedom from subjection or subjugation to laws of nature. For example, an art object is more or less freely formed or, at any rate, not blindly imitated from what is there in Nature. In most cases, the world of art is populated by *transformed* or *transfigured* objects of Culture or Nature. Extending this line of argument one might say: the norms or rules of ethical conduct are not just customs or conventions of this or that society. Axiology is not to be reduced to sociology. Undoubtedly, ethics is influenced by society, but the former is not to be identified with the latter. Ethical rules are more responsive to, and expressive of, free human beings, whereas social rules and regulations are primarily standardised, typical, and, therefore, relatively unable to adapt themselves to subtler aspirations of men.

The Buddhist model of Enlightenment is deeply rooted in the Indian culture. Its basic elements are traceable to the intuitive-symbolic teachings of the Vedas and the Upaniṣads. And it has left its imprints in different forms on other, subsequent, models of Enlightenment. As I have tried to show earlier, the spirit of Enlightenment is freedom and it is said to be attainable by knowledge. But one must not think that there are not other paths as well leading to that ideal. The Enlightened person need not necessarily be a learned or knowledgeable person in the ordinary sense. One can be very wise and virtuous without formal schooling and familiarity with the so-called

learned treatises. Only by reading the "Book of Nature" and contemplating on its immensely rich contents, the R̥g-Vedic poet-philosophers of India and the ancient Stoic thinkers of Greece affirmed, one could liberate oneself from the bondage of earth and what is earthly and of the flesh and its blemishes. In other words, Nature provides the secret key that can unlock the door to the beyond, ethical culture of right conduct and right relation with all that is there and aesthetic culture of beautiful vision of creation and creatures.

To the R̥g-Vedic poet-seers all forms and forces of Nature—the sky, the sun, fire, energy, wind and so on—disclose some transcendental realities. These realities are deemed to be living and moving presences of some deities—Varuṇa of sky, Sūrya of light, Agni of ignition, Soma of energy and inspiration, the Māruts of terrible storms. Every deity, besides its major manifest form, has other kindred expressions. He who gives is a deity or *devatā*. It stands for other things as well. "*Devo danad va dīpanad va dyotanad va dyusthano va bhavati*".⁹ Varuṇa is related to "āvaraṇa" (cover) and reminds one of Greek Ouranos and the Ahuramazda of the Avesta. Mitra is Varuṇa's invariable companion as day is of night. If Varuṇa covers, Mitra uncovers or opens up. The two are orderly related, *ṛtavrata*. Pūṣan and Sāvitr, like Sūrya, are also sun-gods. The Aśvins, the inseparable twins, are gods of brilliance and lustre, and their sister is Uṣas. They are all children of Heaven. The god, which in course of time, came to occupy the most important position in the Vedic pantheon is Indra, originally the master only of thunder and lightning but, later on, the presiding deity of all atmospheric phenomena.¹⁰

Prior to Indra, Varuṇa was regarded as the most powerful god. He was the heaven, the earth, the air, the universe and all besides. Later on, both Varuṇa and Indra yielded their place of supremacy to Viśvakarman, the creator of heaven and earth, the knower and author of all possible worlds. Occasionally Bṛhaspati (the lord of speech), Prajāpati (the lord of creatures), and Hiranyagarbha (the god of golden potentiality) are also mentioned as the Supreme.¹¹

It is clear from the analysis of the attributes of the Vedic gods that, broadly speaking, they represent primarily the powers of light, energy and fertility. Simultaneously, they are also the symbols of needs, protection and elevation or inspiration. Gradually, light became a synonym for life-breath. God turned out to be *that* (*Sat*) infinite and inexhaustible source of light and life, things and thoughts, which assumes such different names and forms as Agni, Indra and Varuṇa for different beings according to their cravings, responding to their prayers. Vedic gods, as one notes, unmistakably stand for light, illumination or knowledge. The true knower is one who can see through all things, beings, and their orderliness, *Ṛta* relates and sustains them all, including the knower himself. *Ṛta* is that transcendental thread that freely (but invisibly) binds all natural objects and human subjects. Subtly it out-

across the (seemingly) dividing lines of all duality and multiplicity preserving the unity of the Universe and saving it from being reduced to a chaotic multiverse. One observes that the loose ends of the above monotheistic and monistic trends of the Vedas are captured back more systematically into the Upaniṣadic concepts of self (*ātman*), God (*īśvara*) and orderly (*ṛtavrata*) or ethical life.

The transition from the Vedic ideas to the Upaniṣadic concepts is very logical and clear. It may be illustrated by the concept of individual self, *jīvātma*¹² as the confluent and manifest form of fire, water and earth, on the one hand, and of the infinite, on the other. The self has been identified with Indra, *Prajāpati* and all other Gods and living creatures. The light of the self is said to be reflection of the Supreme Brahman¹³. The senses and mind of the individual self, though cognizant of the objects in and around them, are not firm and steady in their ability to hold and see them as systematic wholes. The microcosm (man) and the macrocosm (universe) are essentially identical at bottom. From Plato (cf. *Timaeus*) to Leibniz (cf. *Monadology*) this essential identity of the self and God is found time and again in the Western thought. However, the underlying essence of the two-in-the-One is not clearly present or available to the self. That accounts for scepticism regarding both self and God. But, viewed from another and more positive end, one can point out that the infinity of God indicates the boundless scope of both knowledge and freedom potentially available to and realisable by *jīvātman*. Man is superior to all creatures of the universe and has close affinity to God in nature.

Living in accordance with, but not quite bound by, the laws of nature, man, through his moral disposition and continuous efforts, is capable of realising God fully—for he is already a spark of God. Sense and instinct inform him of the forces and constraints of his situation in the world. In a way it is necessary. But primarily, the moral life is one of understanding, reason and intuition. The higher faculties need to be nourished but not tied down by the lower ones. The latter, in turn, need to be receptive of the light of the former. Basically speaking, there is nothing in human nature which is totally opposed to its endeavour to realise the highest ideal.

The Upaniṣadic concept of moral life is not to be understood as logical-conceptual in the narrow sense. It requires one to open up oneself to the higher forces of light and delight of the universe. The *jīva* must realise that he cannot satisfy or fulfil his desires, especially the good ones, without the help of other fellow beings. In the world of fleeting desires and changing human relationship, one cannot expect to realise one's highest aim of life. Inner purity and freedom are necessary without which the self cannot concentrate on what is permanent and realise one's identity with God and others—for the permanent alone is universal. The cravings of flesh need to be won over. These cravings are natural and provide negative incentive to man's aspiration for the higher life of the Spirit. The Upaniṣadic God is not

a transcendental Beyond. He is here both in nature and society, working through the laws of nature and social relations and institutions. Neither natural laws are antithetical to spiritual freedom nor institutional affiliation an impediment to the realisation of God. Our social membership does not demand of us unquestioned conformity. It is through sustained questioning and searching that man can rise above the social relations he is situated in and can rise above and transform them. It is said by the philosopher of the Upaniṣads that a realised soul is not subject to the laws of Nature, and his understanding is not guided by some fixed and universal categories. Of course, at the highest stage, it is said, the *jivātman* gets itself dissolved into *paramātman*. It is likened to the disappearance of the individual rivers into the waters of the vast ocean.¹⁴

The true relation between the individual self and God, strictly speaking, is ineffable and does not lend itself to clear conceptual presentation. For example, to say, with some that the highest stage of that realisation is a state of endless ecstasy, *pūrṇānanda*, or that of perfect freedom, *vimukti*, does not make the matter, intellectually speaking, very clear. The demand for clarity understandably raised by logical intellect remains unfulfilled in this area primarily because of the very ineffable or unspeakable nature of the relation. That is why to speak the unspeakable one needs metaphors and symbols. Such expressions as "rivers flowing into and disappearing in the ocean", "evaporation of camphor in air", "dissolution of a lump of salt into water" and "identity of the jar-bound sky (*ghaṭākāśa*) and the unbounded sky (*paṭākāśa*)" are admittedly metaphorical and suggestive but hardly give any clear and convincing picture of the relation. The main point which is to be brought to the fore is that most of the authors of the Upaniṣads reject the view that the highest stage of self-realisation, realisation of the Supreme by the individual, is marked by the total disappearance or dissolution of the self itself, leaving one undifferentiated and unindividuated Whole. The enlightened soul, it is said, lives with God at the same plane of existence. Because of its self-realisation it does not get disintegrated. The individuality of the self is not lost in the freedom and bliss of the Divine. In this state of *sāyujya* the human self participates in the Divine qualities of all-knowingness and bliss. But this participation is not total and does not extend to His unique powers of creating and controlling the world or of granting emancipation to human souls. This state of liberation, *sāyujya*, is to be distinguished from what is called *kaivalya*, the state of pure oneness.

While Gauḍapāda, Śaṅkara and other non-dualists like Maṇḍana Mīśra and Sureśvara highlight the identity of the real human self with the pure manifesting unity of all consciousness, they differ in their emphasis on the relative importance of knowledge and action as means to attaining emancipation. They draw a distinction between the real self or *ātman* (unclouded by worldly experience) and the *jiva* or individual soul (subject to the diversity of the empirical world). Nescience (*ajñāna*) has two aspects,—

māyā of creative-generative (*vikṣepa*) sort and *avidyā* of veiling-enveloping (*āvaraṇa*) sort. God (*Īśvara*) is the Absolute (*Brahman*) veiled by *avidyā* and projected by *māyā*. The real self appears as *jīva* also because of the said two powers of nescience. The indefinable relation between *Īśvara* and *jīva* is like the relation between a thing and its reflection (*pratibimba*) in water. The non-dualists', interpretation of the Vedas and Upaniṣads is primarily cognitivist, i.e., its accent is on knowledge (*jñāna*). To clarify these difficult metaphysical points, the non-dualists occasionally resort to analogies and metaphors, but they remain firm in their adherence to the path of knowledge (*jñāna-mārga*). To them, to know is to be: in true knowledge there is no knower-known or subject-object duality. Correctly understood, the self does not, rather cannot, perform any action (*karma*) for attaining liberation. It is only the embodied ego, bound by *avidyā*, which performs action. The self by its very nature is liberation.¹⁵ Knowledge is one uninterrupted and abiding plenum. When it arises, it automatically negates its negation, i.e., ignorance.¹⁶ Knowledge is in itself the destruction of the causes of bondage, rather than being the cause of their destruction. While Śaṅkara consistently rejects the view that in addition to knowledge action is also necessary for achieving liberation (*jñānakarmasamyuccavāda*), Maṇḍana Miśra affirms that the appearance of diversity, though false, cannot be removed unless one performs ritual action (*nityakarma*). Besides meditation, this sort of action is strongly recommended both by Maṇḍana Miśra and Sureśvara. However, in fairness to Śaṅkara, it has to be mentioned that he also recognises the need of performing moral actions. Even the seeker of Brahman can and does act. But, from a higher point of view, he does not act in any ordinary sense, i.e., desiring its results. One might say: he acts more as an instrument of a non-willing pure Consciousness than as an agent on his own account. I am quite aware that even this low-keyed formulation is open to several objections, but as my main aim here—to discuss the nature of liberation itself—is not closely related to these objections, I do not propose to go into the details of the same.

In contrast to Śaṅkara, Rāmānuja thinks that self-conscious souls desire things according to their own free will and that God does not stand in the way. More positively speaking, God allows the individuals to will and act "independently". I say "independently" because this so-called independence of the individuals, on the final analysis, is found to be dependent upon the supreme will of God. He is their inner controller. Rāmānuja tries to reconcile this inner control of God over the individuals with the outer (but not false) freedom of the latter.¹⁷ Pleased with the knowledge and devotion of the individual *jīvas*, God grants them emancipation from their worldly bondage. Rāmānuja's notion of *bhakti* (devotion) has a distinct cognitive undertone (*jñāna-viśeṣa*) and should not be confused with pure feeling.¹⁸ In *bhakti-rasa*, feeling of devotion, the duality between the devotee and the Supreme object of devotion, in this case God, is not lost. In fact, its preservation is the neces-

sary condition for making the individual self's aspiration to attain God or God-like perfection intelligible. The need to surrender to God that the self feels is indicative of its cognitive awareness of its own imperfection, of Ideal Being which is able to respond to and remove it, and also of the latter's personal-cum-responsive nature. The concepts of surrender, grace and blissful joy figure prominently in the *bhakti* cults of India. The performative and ritualistic correlates or expressions of these proto-cognitive attitudes and dispositions are prayer, worship, meditation and contemplation, and singing of hymns in praise and adoration of the Ideal Being. Even in deep devotion, the devotee is somehow conscious of the Ideal Being, of his own devotion, and His qualities which draw him towards Him and explain his yearning for Him. According to the devotionalist, the personal idealist and the qualified monist, the realisation of the Perfect Ideal of God does not imply, the extinction of the individual self; realisation implies living a new higher life in union with God and becoming a part of His life, a partner of His inexplicable or uncaused creative play (*līlā*). This one-many relation is said to have two dimensions—temporal and eternal. In different epochs, particularly when the rot of decadence and degeneration set in in a big way, the incarnations of God on earth play this creative role and game for revamping the human values and regenerating the social life. In a more metaphysical vein one might say that this game is going on eternally (*nityalīlā*) and continuous self-individuation is intrinsic to the very nature of God. In this context the metaphor that human beings are limbs of God seems to be very suggestive. The Vedic-Upaniṣadic ideas of liberation or Enlightenment as represented by the *jñānavādīs* (cognitivists) like Śaṅkara and *bhaktivādīs* (devotionists) like Rāmānuja undoubtedly differ in several respects. But that should not make one blind to their points of agreement. For example, Śaṅkara's notion of knowledge maximally exploits the notion of identity—identity of the knower and the known, and scrupulously avoids its discursive association. But he, like Rāmānuja, recognises the necessity of worship, prayer and also *bhakti* for salvation from worldly bondage and attachment to the fruits of work. *Jñāna* or knowledge is neither antithetical nor alien to *bhakti* or devotion: both can take the soul to the same goal of supreme realisation. The devotee can know God and the knower feel Him. Our encounter with the Supreme is of different sorts. These alternative modes of apprehension or realisation are equally valid or authentic. One may exclude the other without even questioning it or claiming to have invalidated it. While Vedānta holds the view that *mukti* means the dissociation of the self from the subjective representations and the world-appearance, Nyāya-vaiśeṣika and Mīmāṃsā maintain that the pure state of the self is unconscious; and, according to Śaṅkhya and Yoga, it is pure intelligence. Without contradicting himself, a Vedāntist may say: a part of ourself, under the strong influence of *vṛttis* and *saṁskāras*, may exist and work as if it were unconscious of its own experience, and, at the same time, a part of it, purged of its all non-essential *vṛttis* and

saṃskāras, may shine like pure intelligence, *śuddha-buddha-mukta buddhi*. The Jaina *anekāntavādi* has rightly criticised different system-builders by pointing out that in their eagerness to justify logically their own views and to criticise those of others, they fail to peruse their alternative character, internal coherence, and external non-contradiction. It is quite possible that what is essentially the same truth may be presented differently and consecutively (*Kram-ārpaṇa*) and yet as elements of an identical set of togetherness (*sahārpaṇa*). The trichotomy of *jñāna*, *karma*, and *bhakti* is figment of the faculty psychologist's imagination and understandably distorted and misused by the system-builders. K.C. Bhattacharyya rightly observes: "The spiritual being that is secured by *karma* and *bhakti* cannot...be very different from *jñāna*. The clarity of spiritual being is implicitly or explicitly the clarity of knowledge".¹⁹ Most of the systems of Indian Philosophy, both of the *āstika* and the *nāstika* variety, broadly speaking, agree in affirming that interested *karmas* sully the original purity of the human soul and that *jñāna* is essential to remove the effects of *karma* and purify it. For example, according to the Jaina view, so long man is in *saṃsāra*, the veil of *karma* on his soul can only be partially lifted by testimony (*śruti*) and ordinary knowledge (*mati*). In the state of perfect release (*mokṣa*), the soul has in it infinite knowledge (*anantajñāna*), infinite perception (*anantadarśana*), and in addition, is credited to have even omniscience (*kevala-jñāna*), i.e., the rare achievement of having perfect knowledge of all things simultaneously.

The exponents of the *Nyāya-Vaiśeṣika* school of thought are unanimous in their recognition of *mokṣa*, i.e., freedom, as the ultimate end of life. But they differ in their characterisation of this end. According to Kaṇāda, a person attains liberation when his *karma* is rendered ineffective or when his internal organ, *manas*, gets disjoined from his self. Only in *samādhi* the latter condition is obtained.

Vātsyāyana's definition of liberation, *apavarga*, has been constructed in terms of Brahman and bliss, i.e., absence of pain, and is bound to remind its Upaniṣadic roots. Udayana defines it as a state of indifference (*Kaivalya*) to be attained through both discursive knowledge and devotional attitude. The bondage and the resulting suffering, *duḥkha* and *kleśa*, of man are due to false knowledge (*mithyā-jñāna*), identification of self with not-self, including body, senses, feelings and knowledge. With the destruction of attachment, the urge to act dies down and therewith disappear rebirth and sorrow. In a rather unorthodox vein, Udayana speaks of possibility of *sarvamukti*, liberation of all. This concept of liberation is traditionally associated with the Buddhist. Unlike the Hindu, the Buddhist's accent is on the collective liberation. One cannot be truly liberated leaving the rest in bondage. Further, somewhat like the Buddhist, the *Nyāya-Vaiśeṣika* thinker holds that the state of liberation is marked neither by pure knowledge nor by pure bliss; it is a state of perfect qualitylessness. Kumārila (*Pūrva-Mimāṃsā*) is also of the view that in the state of liberation, the self does not have the qualities of pleasure,

pain, knowledge, willing, etc. These qualities are not native to the self, which has in it only the potency of knowledge (*jñānaśakti*). Knowledge of objects is generated by the activity of the *manas* and other senses. Distinct from the body, the self perceives itself by *mānasa-pratyakṣa*, a mental perception. Unlike Kant, Kumārila thinks that the self can be both subject and object of knowledge. Though knowing of the self itself as subject and other things as objects take place simultaneously but their modes of being presented to the self are not identical. The self is not presented as the knower of knowledge of objects. It is presented as the awareness of "I". To attain liberation the self has to enjoy and suffer *exhaustively* the fruits of his good and bad actions, perform *nitya-karmas*, and refrain from performing all sorts of *kāmya-karmas*. For non-performance of the former produces sins and performance of the latter binding effects. On the attainment of liberation, the body gets dissolved, performance of action becomes impossible, and thus rebirth is ruled out. As one sees, most of the Indian philosophers and *sādhakas* believe in the attainability of *mukti* or freedom from pain. The consciousness of pain is of such a nature that an intention to get rid of it is inherent in it. Unless one gets rid of it, its facthood in a sense is unquestionable. Even after one frees oneself from it, its non-existence remains as a fact in one's consciousness or at least as a potential memory. Feeling as well as non-feeling of pain as "object" has a peculiarity of its own. It does not have a causal specificity ordinarily associated with the presentation of a thing to the bodily senses producing some particular sort of irritation and remembrance. The feeling of pain easily lends itself to cognitive reflection wherein, interestingly enough, according to both the Buddhist and the Vedāntist, its unstable, incompatible, and dissoluble characters become clear.

According to the Sāṃkhya view, the feeling of pain, generated by the *rajas guṇa* of *prakṛti*, though, strictly speaking, alien to the self, is taken to be a part of and suffered by the self because *aviveka*, lack of spiritual reflection and sense of discrimination. In *viveka-buddhi*, the human mind in its dying moments delivers its sense of distinction from the self. *Mukti* does not owe its origin to any deliberate enterprise. It is spontaneous and part of life-process. *Mukti*, when attained, is like a given part of life, marking a joy in the disappearance of the experience of pain. While for Vedānta, this *ānanda* is positive and abiding, for Sāṃkhya, it is like a hymn sung in praise of the final passing away of the mind as the source of all pain and suffering. Freedom is the cessation of *bhoga*, mental experience of *natural* objects, marked by enjoyment and suffering. *Buddhi* informs uniformly every self as *bhoktr*. Unless the self can rise above or put an end to this *bhoktva-buddhi*, the sense of being an enjoyer-sufferer, *bhoktva* persists. The pure self is to be understood as individual among individuals (*puruṣā-sāmānya*) and manifests itself as having no character (*nirdharmaka*). The existence of multiplicity of self is rooted in *asmitā*, a persistent sense of "I am", of *buddhi*. It is only at the functional level of *asmitā-buddhi* that the community of selves may be said to

be existent. Really speaking, they never form a unity. Each self is essentially an *Īśvara*. But without reference to *asmitā-buddhi*, it is not possible to assert one self-*Īśvara* is or is not simultaneously conscious of other selves-*Īśvaras*. After the attainment of *mukti*, when the sense of "I am" is not there, the self, though it retains its individuality, can hardly be said to be conscious of it. The individuality of *mukta puruṣa*, liberated self, is contentless: neither its own self nor other selves can be its content. To speak of content without *buddhi* makes no sense in the context of *Śāṅkhya*.

While, according to *Śāṅkhya* and *Vedānta*, the realisation of freedom is primarily a knowing process, *Yoga* states that it is a willing process. In *bhakti*-systems the achievement of freedom is mainly ascribed to a feeling process. The presupposed tripartite distinction of the mental process is a heuristic-classificatory device and not a true description of the in-goings of the mind. In fact, the mental in-goings, like the *guṇas* or *Prakṛti*, are always variably mixed up. To get rid of the bad will of *bhoga*, says *Yoga*, one has to exercise one's good will under the light of *buddhi* (knowledge) and *asmitā* (feeling). Frontal and passing wills need to be sustained by a deep and abiding willing, and frontal and fleeting feelings by a deep and lasting feeling. Every stage of *yoga* is marked by this duality. The *yogi* is said to have two souls—inner and outer. While, outwardly, he does actually will to be what he is not, inwardly he holds back the power to will. Logically, it is not possible to regard the latter as the product or result of one's willing. Rather it is the ground of the former and should be clearly called freedom. Willing is not possible without presupposing freedom of will. Freedom is a fact and not obtained through ratiocination. As a result of "outer" free wills and acts what the *yogi* gets in a sense—an "inner" sense—already available to him as the content of his wills and acts. One might rightly observe: in "outer" *yoga* the *yogi* gets the already got, i.e., what is already there as a truth or value in the realm of his boundless "inner" freedom. *Patanjali* speaks of two grades of *yoga*—*samprajñāta* and *asamprajñāta*. The former has in its four sub-grades to be defined in terms of the contents of its object—*vitarka*, *vicāra*, *ānanda*, and *asmitā*. *Samprajñāta* means concentration on a *vṛtti*, intending an object. The object has both its gross (*sthūla*) and subtle (*sūkṣma*) existence. When the concentrative intuition is concerned only with the gross particularity of the object, it is called *vitarka*. At the next higher level of intuition (*vicāra*), the subtle aspect of the object is grasped. When *vicāra* succeeds fully in grasping the subtle essences (*tanmātras*) of objects, the *yogi* experiences an inexplicable joy (*ānanda*). This joy is mainly associated with the said process of grasping and not to be confused with subjective pleasure. Of course, an element of subjectivity is there. Intensive concentration on *ānanda* lifts the yogic awareness to the still higher level of *asmitā*, when the *yogi* encounters the subject itself.

In *samprajñāta yoga*, the mind of the *yogi* is fixed on a content, assumes its form, and gets "in to it" (*atstha*). This state is also called *samāpatti*. In

this state the mind is not only self-consciously concentrated on the content but also in conscious of its will to get itself withdrawn from other contents. The mind puts in added efforts to beat off all distractive influences on itself, to be more and more identified with the object of its reflection, and filled in by the latter. The yogic consciousness is spiritually reflective, simultaneously abstractive and concentrative, wilfully disengaged from other objects and exclusively engaged in the chosen object, restfully active in nature. At its high *samāpatti* stage the inclinations of the mind become feeble. With the reduced functioning of *rajas* and *tamas* and owing to cultivated habit (*abhyāsa*) and disinterested spiritual practice (*vairāgya*), the distractive tendency of the mind steadily comes down. As long as *vṛtti* remains, *bhoga* or experience is unavoidable. *Vṛtti* implies *vikṣepa*, actual or potential. Even in *samprajñāta samādhi*, there is potential experience of suffering. *Prajñā* that shines in *samādhi* enables the *yoga-yukta* self to witness the suffering self as if from a higher level. *Prajñājah saṁskāra* is opposed to and weakens *vikṣepjah-saṁsakāra*. But without *vairāgya* one cannot steadily master the will to *nivṛtti*. From *vairāgya* through yoga, the mind reaches the stage of *para-vairāgya* (without *vṛtti* and knowledge) marked by desirelessness and final negation of unfreedom. Strictly speaking, freedom means freedom even from knowledge, for knowledge is somehow rooted in *vṛtti*. When *nivṛtti*, the state of desirelessness, reaches its zenith, the self is superconscious with all its activity at complete rest.

Yoga is a pre-Aryan tradition of spiritual life in India. It was for a long time more in the nature of practice than of theory. The process of giving it a theoretical shape lasted for a long period indicating its interaction with other Indian systems of thought. The same thing may be said about the teachings of the Buddha. He himself was firmly opposed to the idea of systematisation or theorisation of his views born out of his own meditation, contemplation, and ultimate realisation. In a more general vein one might say, as I myself have briefly alluded to earlier, that all systems of Indian philosophy, both *āstika* and *nāstika*, are traceable to pre-systematic and open-ended spiritual intuitions and poetic insights preserved in the Vedas and the Upaniṣads. The word "spiritual" need not be taken always as a synonym of "religious".

Systematisation of ideas is like institutionalisation of practices. Gradually, attempts are made to marry the two, making them in the process more and more clearcut and fixed, and easily isolable from other and even kindred systems and sub-systems. For analytical study one understandably welcomes well-defined systems and well-formed institutions. But it is clear from the history of Indian culture that primacy of reason in the realms both of theory and practice gives rise to more and more diversity and conflict and hardly brings about the unity of their elements. The main reason why I did not take up the Buddhist notions of enlightenment and *nirvāṇa* before looking into the comparable notions of other systems of later origin is that their presentation, at least to start with, was simple and flexible, lending itself to

different formulations and interpretations. The Jaina view of *anekāntavāda* went a step farther in explaining and legitimising the said hermeneutic diversity without generating any antinomy.

Though clearly pre-Vedic in their origin, yoga and tantra, as they come down to us, are mixed up with a number of post-Vedic ideas and their systematic forms. Strong in their practical-procedural side, these two ancient trends of ancient Indian culture have left their deep imprint in different ways both on the axiology and eschatology of different schools. That the *summum bonum* of life is not merely a matter of knowledge is more or less recognised by all. Even those who like Śaṅkara highlight the importance of the path of knowledge (*jñāna-mārga*) are never tired of emphasising the psycho-somatic base of the spiritual endeavour (*sādhana*). As I have indicated earlier, cognitivism and devotionism, rightly understood, are mutually complementary and not exclusive.

The most important component of the European spirit of enlightenment, we know, is reason and reason-based knowledge. In most cases, this reason has been accepted and praised for its discursive functions, associated with the marvels of experimental sciences, and put to classificatory, definitive, measurable and system-making uses. Only a few critical minds like Hume and, to some extent, Kant saw and spoke of the limits of reason. Most of them gave the impression that they could foresee the confident and victorious march of science. Bathing in the reflected sun of science, the European felt, for the first time and, perhaps, with some justification, that he could now successfully penetrate into the secrets of the universe and that, on the basis of that knowledge, it would be possible for him to conquer the world physically as well. In this otherwise unflawed story of success, one might say, the most important missing principle is "cogito" or "I think" which primarily made this success story itself possible by way of largely freeing itself from the dogmatic and dying institutional moorings of theology. Religion was humbled and disturbed, though not quite displaced, by science; the latter started assuming the respectability of the former and increasingly staking its claim for the high position it had held. The concepts of freedom, though theoretically defended, started yielding the pride of place to the concept of a rational order. The search for a new social order and the laws underlying it is collateral to the enlightened spirits' search for the all-pervading laws of Nature. Between the increasing pressures of science and society of the time, the self got somewhat smothered. Freedom was considered almost exclusively in its social dimension. The inner or individual aspect of freedom did not receive due attention even from political individualists. The upswing of science and the resulting upgoing of its authority gave rise to a new collectivist culture, which began to weaken not only the theological authority of the time but also the very base of spiritual culture. The idea gained ascendancy that what could be universalised was scientific culture and not spiritual culture. This new philosophy of science proved a damper, if not a positive

hindrance, for those who would follow the internal way to the spiritual culture of freedom for all (or *sarva-mukti* as we called it earlier in India).

I would return to discuss these points in a more connected and detailed manner later on.

Meanwhile let me round up the Buddhist account of enlightenment which, interestingly enough, is *proving so attractive* and precious to the Euro-American mind, despite (or because of?) its intensive exposure to the influences of modern science, technology and industry.

When the spirit of European enlightenment felt deeply drawn by the ideal of perfect knowledge, i.e., science, the Indian defender of *jñāna-mārga* as primary means to *mukti* had a different concept of knowledge in his mind which, as I have already pointed out, does recognise the presence of right elements of feeling and willing within its scope. Of Kant's notion of goodwill it has often been critically observed that it wills nothing, i.e., it is contentless. The exponents of Sāṃkhya, Yoga, and Buddha may intervene in favour of Kant and plausibly argue that the reflective will that wills nothing is, by its very cultivated culture, not meant to will any *particular* aim or objective, and that it is intended to have only that ought-property which is *universalisable*. If a man entertains a will directed to a particular coveted object, without first establishing control over will and imparting by power of reason/knowledge a universalisable good property to it, he will find his mind bound to that object and afflicted with anxiety (*vikṣepa*) about the uncertain outcome of his endeavour. Both Yoga and Buddhism defend the ideal of restful, i.e., non-anxious and quiescent state of consciousness. "Arrested activity" (*niruddha*) and "contentless will" (*niṣṭti*) are kindred states of elevated consciousness of freedom. The attainment of quiescence has been described by the Buddhist as the highest bliss. The goal of life is to rise above or stand apart from the ceaseless motion and action of the phenomenal life. Stacherbatsky writes: "The name for this quiescence was *Nirvāṇa*. The term was pre-Buddhist used in the sense of the dissolution of the personal in the universal whole (*brahma-nirvāṇa*). The means of attaining this was *Yoga*. According to some scholars early Buddhism was merely *Yoga*, and lack of permanent individual, *Nirvāṇa*, etc. were invented by the later Buddhism. These scholars interpret *Yoga* as vulgar magic. *Yoga* is, however, not magic but well-devoted technique of concentration. *Yoga* brings about a 'condition of quiescence' "20.

Whether *Yoga* is magic or not depends on how one interprets it. *Yoga* may be regarded as magic without the adjective "vulgar". K.C. Bhattacharyya, for example, finds an important place for magic in *Yoga*. The first point in connection with the *Yoga* as magic is to be borne in mind is this. It owes its origin to some inclination or desire, *ṛtti*, although it does not ultimately aim at it. The content of Yogic consciousness, whatever it may be, is presented to the mind, because of *ṛtti*-bound *buddhi*, in a form which is partly faithful and partly unfaithful to the original real, e.g., the presence of

a coloured object in the mirror. Besides, Yoga successfully interferes with the causal process of nature and its experience (*bhoga*) in our mind. It transforms the "natural" and brings about something "unnatural" in its place. "(Yoga) is thus tantamount to the willing of miracle or magic... There is no escape from magic."²¹

The basic motive of Buddha's teaching is redemption from suffering. All forms of knowledge and conduct are subordinate to it. Psychology occupies a special position in the realm of knowledge. The physiological basis of psychology is also duly recognised. The physiological urge to act, the volitional preparation for performance of it, the act itself, and the intellectual awareness of its possible consequences—the feeling of regret or pleasure, are easily analysable stages of action. Good actions tend to weaken or destroy the passions and illusions underlying *Karma* and promote un-selfishness or egolessness. The eventual outcome of good actions is *nirvāṇa*. It is distant from, or alien to, the nature of the mind. Tied down to the phenomenal world (*saṃsāra*), the mind in a subtle way remains ever in touch with *nirvāṇa*. Even then man, being situated as he is in the phenomenal world of ceaseless change and numerous *saṃskāras*, has to go through certain stages to get to his goal. The eight stages mentioned by Buddha are all Aryan in origin: right faiths, right aspirations, right speech, right conduct, right mode of living, right effort, right mindedness and right rapture.

The mind of man is so constituted that it not only knows its *nirvāṇa*-promise but also of the impurities standing in the way. Unless the impurities like lust, anger, hatred, envy, pride, delusion, and attachment to objects are removed by right effort, there can be no enlightenment. From the level of sense-bound cognition of complex objects, *skandhas*, one has to rise to that of intuition, *prajñā*. And it ripens into *bodhi* or enlightenment. *Dhyāna*, meditative contemplation and exploration of the deeper reaches of consciousness, is said by the Hinayānist to be marked by four stages: joy born of solitude, deep peace and calm of mind, a state of completely stilled self-love without any trace of passion and prejudice in it, and self-control in tranquillity. It is also promotive of some basic noble sentiments, viz., fondly kindness (*maitri*), compassion (*karuṇā*), cheerfulness (*muditā*), and impartiality (*upekṣā*). Many of the said effects of *dhyāna* are very similar to the known outcomes of yoga. The compound term *yoga-dhyāna* is perhaps the right expression to be used in this spiritual context. But one is advised to recall the different aims of yoga envisaged in different Indian systems of spiritual culture. The Upaniṣadic seer-thinker takes yoga in its literal sense, i.e., union, union with or realisation of Brahman. In Patanjali's Yoga, it has been primarily taken to be cognitive conquest of whatever is real,—a sort of total "truth-touch" (*satyānubhava*), to use a term of Sri Aurobindo. Will not "reality-touch" (*tattvānubhava*) be a more appropriate term to describe the spiritual state of affairs in question?

Disinclined to be drawn in any metaphysical dispute regarding the nature

of *nirvāṇa*, Buddha tried to clarify its meaning by a simile. The liberated self, said Buddha, is like an extinct lamp. Literally, the word means "blowing out" or "cooling down". Associated meanings are numerous, viz., calm, sheenlessness, liberation, disappearance, settling down, fulfilment, blissfulness. When the oil that keeps a light lit is exhausted, the light goes out. The flame is no longer there. After all, this is a figurative expression. Buddha was deeply aware of the fact that no figurative expression can take one deep into the heart of the issue. But this is the only possible approximation available to the normal human mind for the understanding of the unspeakable nature of *nirvāṇa*. One can attain *nirvāṇa* in this *samsāra* when one's passions, but not life, come to an end. This is called *sopādhiseṣa nirvāṇa* (Pali: *Saupādhiseṣa nibbāna*). In the state of *anopādhiseṣa nirvāṇa*, (Pali: *anupādhiseṣa nibbāna*) the very being of a person, the negation of *śūnyatā*, gets negated or comes to an end. *Anopādhiseṣa nirvāṇa* marks the selfless reality or *śūnyatā*. It is like speckless space or windless air. This state of absolute selflessness in which, one might say, the phenomenal world of experience stands dissolved, is also known as *parinirvāṇa*, a state higher than *nirvāṇa*. Somehow even *parinirvāṇa* has a reference to the individual (may be to his highest stage of perfection) and is, of course, to be distinguished from supreme reality called *śūnya*. Only negated or determinate *śūnya* appears as individual, human or otherwise.

Śūnya itself knows no change, i.e., is beyond change. He who attains *nirvāṇa* has no activity whatsoever in him and all his desires to act stand absolutely calm and tranquil (*cittavṛttinirodha*). To be impossible for him, says Nāgaseṇa. It is an eternal state that lies behind the *skandhas*, and is not subject to the law of birth, disease, decay, and death. Yet, according to Buddha, it would be wrong to hold that *nirvāṇa* means annihilation. At times it has been described as a state of identification with the Flux that is Reality. In that case, strictly speaking, *nirvāṇa* should not be taken as a *state*. It is then a process. But *nirvāṇa*, being the end of a spiritual process, cannot itself be a process. So this approach is also found to be inadequate. Thus only through a series of negation one might hope to get close to the true meaning of *nirvāṇa*. Even then one can hardly be sure to have grasped it exactly. Perhaps, because of its intrinsic indefinability, Buddha did not think it fit even to try to define this enigmatic negation of every phenomenon. To affirm that *nirvāṇa* is eternal (*śāśvata-vāda*) or to deny that it is a temporal process (*uccheda-vāda*) rooted in passions etc., says Buddha, are equally untenable. The real truth of the matter is not itself a position, still less a third position, trying to reconcile the said two positions. Both affirmation and denial of any position are two equally distorted ways of theorisation. Buddha's is not a theory, not a position. Murti says it is a "no-position" and free from the inadequacy of either.²² Even then, the point which in defence of Buddha's "no-position" view demands our attention is: *nirvāṇa*, though unspeakable in nature, and beyond conceptual theorisation, is *positive* in character. The term *nihilisma*

often used in this connection is unfortunate and disinformative. After all, *nirvāṇa* is *tattva*, Reality, despite its ineffability. In a para-normal experience, this Reality is non-discursively apprehended.

Whatever interpretation, positive or negative, I prefer, needs some substantiation. The negativist interpretation draws its main inspiration from the Buddhist's insistent denial of the ego-principle. Nāgasena's views on the matter, as found in the *Milinda Pañhā* (*Sacred Books of the East*, Vol. II) lends strong support to the nihilistic interpretation of *nirvāṇa*. *Nirvāṇa* has been linked to unborn and immortal space. It does not change or decay. Nor is it reborn. It is not an adjunct to anything. Nothing can envelop or obstruct it. It is infinite. While the said qualities of *nirvāṇa* give an unmistakable negativist interpretation, one cannot miss some other qualities mentioned by Nāgasena himself which proved incompatible with the nihilistic view. *Nirvāṇa* has been compared with *Kalpātaru*, the legendary wish-fulfilling tree, which yields all sorts of fruits answering all sorts of human desires. *Nirvāṇa* has been said to be delightful, shining, beautiful in colour, fragrant and of a very pleasant taste. All these qualities are bound to lead one to believe that *nirvāṇa* is positive in character.

A somewhat positive view is found also in the writing of Buddhaghosa. It is definitely inclined towards the positive part of Nāgasena's view. Its origin cannot be ascribed to contemplation. It is only attained and realised by it. It knows no origin, decay or death. It is eternal. It is without any form and colour. Since it is *realisable* by transcendental intuition, its *reality* cannot be denied.

Moreover, Buddha himself is reported to have said about it that it is unborn (*ajātam*), un-become (*abhūtam*), un-made (*akālam*), and un-compounded (*asaṅkhatam*). Consequently, it is hardly discernible.

Some thing may be indiscernible and yet positively real in nature. Notwithstanding Buddha's interpretation, some modern scholars like Paul Dahlke and Yamakami Sogen are firm in their negative interpretation of Buddha's words on *nirvāṇa*. There is no doubt that the Hinayānists representing the older school of Buddhism were in favour of the negative interpretation. According to them, a deep and continuous study of the nature of things, of the *Skandhas* (5 aggregates), *Dhātus* (18 elements of existence) *āyatanas* (12 bases) leads to the total cessation of all psychosomatic functions. And as a result of that all objects of knowledge,—past, present and future, “disappear”. If whatever sustains intellection gets exhausted, the process of intellection itself comes to an inevitable end. This view of *nirvāṇa* is emphatically asserted as anti-nihilistic.

The positivist view of *nirvāṇa* finds favour with the *Vaibhāṣika* school. *Nirvāṇa* is likened to an absolutely positive state of existence which is free from all passions and stains of the personalised life. The *Sautrāntikas*, like the *Vaibhāṣikas*, are strongly in favour of the positivist interpretation of *nirvāṇa*.

which, it seems, deeply, later on, influenced the ideas of Vedānta and Nyāya on the question of human liberation.

The views of the *Sarvāstivādins* (the proponents of all-existents) and the *Vaibhaṣikas* on the nature of *nirvāṇa* and the related issues merit mention for more than one reason. The seventy-two categories of elements (*dharma*s) are said by the former to be of composite nature (*saṃskṛta*). Though subject to the law of causation (*pratiyaśamutpāda*) and mutation, the said reals, mental, material and otherwise, are substantially eternal and imperishable. The philosophy of all-existents speak of three eternal incomposite elements or reals (*asaṃskṛtadharma*s), viz., *ākāśa*, *pratisaṃkhyānirodha*, and *apratisaṃkhyānirodha*. *Pratisaṃkhyānirodha*, observes the *Sautrāntika* Kamalaśīla, is nothing but dissociation of consciousness from passions and impurities, and as this dissociation is to be brought about by transcendental knowledge, i.e., *pratisaṃkhyā*, it is called *nirodha* dependent upon *pratisaṃkhyā* (*prajñā*) or the possible knowledge of truth. One has to be clear that *apratisaṃkhyānirodha* is not opposite to *pratisaṃkhyānirodha*. It is quite different from the said dissociation. It is an occasion or a situation which negates the possibility of the emergence of likely effects. This negation or neutralisation of likely effects is not cognitively realisable. It has to be brought about by removal of the causes and conditions of the possible effects. In fact here Kamalaśīla is engaged in a debate with Kumārila trying to refute the views of the latter on the matter. While the *Vaibhaṣikas* think that the said two *nirodhas* and *ākāśa* are absolutely positive in character, *Sautrāntikas* regard these categories as purely negative, conceptual-fictional, having no objective reference. Being essentially uncaused in character, the *Sautrāntikas* maintained that the *Vaibhaṣikas* are wrong in regarding these conceptual categories as existential in character. Kamalaśīla goes to the extent of condemning the *Vaibhaṣika* views on the nature of eternal entities as heretical, i.e., basically alien to the teachings of Buddha. As regards Kumārila's criticism, he points out that it is misdirected. For, since, according to the *Sautrāntikas*, this so-called eternal entities are merely man-made intellectual fiction, it would be wrong to ascribe causal efficacy to them. The law of causality works only in the world of reality.

The debate between Kumārila and Kamalaśīla, particularly with reference to the role and scope of causality, has a very important bearing on the question of *nirvāṇa*. The *Sautrāntikas* wanted to defend the view that *nirvāṇa* is a simple cessation of the phenomenal worldly process. He was obliged to assume the existence of something real before *nirvāṇa* and also of something equally real which disappears afterwards. Given this view, *nirvāṇa* becomes an effect of causes (*saṃskṛta*). The *nirodha* does not imply extinction of anything real. What it means, as I have said, is a mutual dissociation of the elements of existence without leaving any causal trace and efficacy for giving rise to a future combination leading to the mysteries of life in phenomenal existence. The *nirvāṇa*, say the *Sautrāntikas* like Kamalaśīla and Śāntarakṣita, is a state of absolute purity and perfection, without any trace of pain and

suffering in it. *saṃsāra* is real; but unrelated to it, *nirvāṇa* is unreal. The absolute end of all manifestations, the latter marks the termination of all passions of life (*kleśa-janmano kṣayaḥ*) without any positive counterpart, any substratum (*dharma*) to support it. Both *ālaya-vijñāna*, the monistic spiritual ground of the idealistic Mahāyānists and *śūnyavāda*, the principle of relativity, of the Mādhyamikas are denied by this school. However, during its long career, the Sautrāntika school had undergone considerable change. Its robust realism got diluted and its difference with the Yogācāra idealism or Vijñānavāda narrowed down. While the latter refused to recognise the reality of the external world, the Sautrāntika conceded that, though purely phenomenal, it is there. When the momentary flashes, the ultimate constituents of the external-phenomenal world (including sense-impressions, consciousness and volition) are no more there, *nirvāṇa* is attained. Bondage (*saṃsāra*) is due to nescience or ignorance (*avidyā*) and liberation is the absolute cessation of the latter. In response to Kumārila's criticism, Śantarakṣita affirms, and Kamalaśīla endorses, that both *saṃsāra* and *nirvāṇa* are essentially positive in nature, sustained by one and the same absolute consciousness: the former being its defiled or tainted form and the latter its purified form. These two philosophers, in spite of their professed affiliation to the subjective idealism of the Yogācāra variety as propounded by Dignāga and Dharmakīrti, introduce themselves clearly as Sautrāntikas. In terms of a doctrine of degree, it is not *logically* impossible to reconcile the Sautrāntika realism with the Yogācāra idealism. In several systems of philosophy, e.g., Vedānta and Kantianism, these two tenets are found to be co-existent and co-functional—(needless to add) of course, in different ways. But historically speaking, one would perhaps be justified in holding that, according to the original Sautrāntika position, *nirvāṇa* marks the absolute end of the stream of consciousness, with no deeper and more comprehensive consciousness to sustain it. But it seems that as a result of the increasing influence of the concept of the cosmic presence of the body of the Divine Buddha (*dharmakāya*) and that of an all-pervading store or sustaining consciousness (*ālaya-vijñāna*) the earlier Sautrāntika position was recast and modified later on.

In the form of *dharmakāya*, Buddha is the essence of all that exist. Buddha embodies the very unity (*satatā*) of essence and existence. The *dharmakāya* is an all-pervading personal (i.e., knowing, willing and loving) presence. Since it is the very essence (*svabhāva*) of Buddha, it is also known as *svābhāvika-kāya*. In a little more concrete form, but not experienceable for all, Buddha assumes *nirmāṇa-kāya* and comes in contact with the world at a particular time and for a specific purpose. Only the deserving and the blessed can cognise him in that form. The third form of Buddha, *rūpa-kāya*, i.e., his actual physical form, is visible to everyone. These three *kāyas* of Buddha are bound to remind one of the Hindu view of incarnation (*avatāravāda*) and its three graded forms, viz., the all-comprehensive and perfect form (*pūrṇāvatāra*), the time-bound or epochal form related to a large but specific purpose

(*yugāvatāra*) and the temporary-transient form (*kṣaṇāvatāra*). In all *kāyas* or forms Buddha manifests himself, and on the attainment of *nirvāṇa*, it is said, one enters into his *dharma-kāya*. Since *dharma* is positive, it is argued, *nirvāṇa* cannot be negative.

At times a point has been raised whether *nirvāṇa* which means extinction of life should be regarded as positively real (*bhāva*). For example, Candrakīrti critically points out the weakness of the analogy between light and life and observes that the extinguished flame of lamp due to exhaustion of fuel can hardly be regarded as *bhāva* in nature. To the Sarvāstivādins and the Vaibhāṣikas all times—past, present and future—are equally real, at least phenomenally real. Because the sign of reality (*dharma-lakṣaṇa*) is verily in them. Their response to Candrakīrti's point would be somewhat like this: *nirvāṇa* does not mean literal annihilation of life; it only means extinction of passion and life in the *dharma-svabhāva* or *nirvāṇa*. The central point to be remembered here is: *nirvāṇa* itself is credited with essential or elemental positive reality (*dharma-svabhāva*) in which passion and life having less positive reality (*dharma-lakṣaṇa*) may disappear. Another collateral but very important point to be carefully borne in mind is: the "things" which in a sense disappear in the more positive reality (*dharma*) or *nirvāṇa* have their own reality (*dharma*) and cannot be totally nihilated. As we will find later on, this approach was accepted in a modified form by Vedānta and contested by Nyāya-Vaiśeṣika.

Long before the Nyāya-Vaiśeṣikas appeared on the scene, the Mādhyamikas disputed the basic Hinayāna contention on the nature of *nirvāṇa* briefly delineated above. Nāgārjuna's contribution to this debate based mainly upon his dialectics is almost universally recognised as extremely illuminating. *Mādhyamika Kārikas* of Nāgārjuna and Candrakīrti's commentary on it, *Mādhyamika Kārika Vṛtti*, though seemingly negative and critical in their orientation, are, rightly understood, constructive both in their inspiration and execution.

The basic critical part of the *Mādhyamika* dialectic rests on the proclaimed correctness of its fundamental principle of relativity. It affirms the relative character of everything that exists and denies the absoluteness of whatever exists. Technically speaking, it is the principle of the dependently-coordinated-existence of the elements (*dharmāṇām pratitya-sam-utpāda*). Nothing exists by itself, i.e., unconditionally or without being related to and dependent upon other(s). Therefore such terms as Absolute and Ultimate have no referential meaning. Other interpretations of the term "relativity" are also available. One of them deserves special mention. Whatever is relative is also *svabhāvasūnya*. This *sūnyatā* of every existent is due to its essential relational character. One cannot understand it and speak about it without referring to the network of changing relations in which it is situated. It eludes conceptualisation and exact linguistic articulation (*śisprapañca*). For it always lends itself to alternative formulation. Every attempt to formulate

it exactly ends up in its bifurcation or distortion. The limit of language becomes very manifest in this case. However, the Mādhyamikas affirm that their relativism is not to be confused with negativism. "We are relativists", says Candrakīrti, "we are not negativists". It is against this background one has to understand Buddha's reluctance to speak about metaphysical subjects and love for silence. Let one not forget that his studied silence did not prevent him from communicating the truths he realised in life. Though basically opposed to theorisation, he spoke, preached and persuasively expressed himself. His communicative silence was an eloquent critique of the sterility, antinomous character and dry paroxysm of the so-called clear-cut conceptual thought. Words fail there at that level not because of their fault or frailty but the very nature of reality they are called upon to map proves somehow unmappable, at least not clearly in thought.

The difficulties invariably attending the attempts to speak the unspeakable nature of *nirvāṇa* which had bothered Buddha, the anti-theorist seer-speaker, are found to have equally, if not more persistently, bewildered the theoreticians who tried to clearly formulate his insights and teachings on the subject. When one recalls that most of these scholars were themselves very saintly in their life and work, i.e., not intellectual in the ordinary sense, one realises convincingly the intractability of the issue. Nāgārjuna's criticism of the Hīnayānist conception of *nirvāṇa* impresses me very deeply for two main reasons. First, Nāgārjuna, himself a great *sādhaka*, a man of deep pious sentiment and acumen, encountered in his own life the problem of ineffability of *nirvāṇa*, the highest valued experience (of life?). And, secondly, his formulation of the said ineffable remains still unsurpassed in clarity and acuity. It is no wonder that on the issue of speaking the unspeakable no other Indian thinker, except perhaps Śaṅkara, is so frequently referred to as Nāgārjuna. In brief, his tetralemma may be formulated in the following ways:

- I. *Nirvāṇa* is not a positive entity (*bhāva*). For, were it so, it being itself caused and produced, would be subject to decay and disappearance. But all are of the view that *Nirvāṇa* itself is uncaused and unproduced.
- II. *Nirvāṇa* is not a negative entity (*abhāva*). For, were it so, its causes, like the defiling elements (*kleśa*) and individual existence, being impermanent, *nirvāṇa*, too, would be impermanent, i.e., bound to cease to be what it negatively is. But, *nirvāṇa* is regarded by all concerned as eternal.
- III. *Nirvāṇa* is not both positive (*bhāva*) and negative (*abhāva*). For, were it so, it would be dependent upon the totality of causes and conditions, both in respect of its positive and negative aspects, and, in that case, cannot be regarded as Absolute. But, *nirvāṇa* is regarded by all concerned as Absolute.
- IV. *Nirvāṇa* is neither something positive (*bhāva*) nor something negative (*abhāva*). Since one does not know what *nirvāṇa* as *bhāva* is nor what

it as *abhava* is, one does not know what their negation—negation of the disjuncts, would be like.

Let *pn* stand for positive *nirvāṇa*. Then the above quadrilemma in the language of symbolic logic would look like the following:

- I. $\sim pn$
- II. $\sim \sim pn$
- III. $\sim (pn \sim pn)$
- IV. $\sim (pn \vee \sim pn)$

The Buddhist thinkers like Nāgārjuna, though they are logicians of high competence, are evidently not impressed by the clarity of the so-called logical thinking and its exploits. Formalisation or formulation of a position or its opposition is not of much cognitive consequence to them. To this attitude they ascribe Buddha's own disinclination, if not definite distaste, towards undecidable metaphysical speculations, theorisation and logical logomachy.

From this it would be rash to conclude that Nāgārjuna or, for that matter, even Buddha himself dispensed altogether with logic in his bid to communicate with the people. The proper use of logic, the Mādhyamika points out, lies in *showing* the limits of logic. Only on the sound basis of epistemology the seeker of truth may *see* for himself the flaws and faults of the logical formulations of the so-called knowledge of the highest truths, of *nirvāṇa*, for example. The above quadrilemma makes it abundantly clear that every so-called logical enterprise and technique to state precisely what *nirvāṇa*, the Absolute, is is fated to fail. When it is said to be positive, it turns out (in true knowledge) to be otherwise. When that "otherwise" is found out and presented, again it turns out to be other than "otherwise". Consequently, their conjunction and disjunction are, on intuitive epistemic scrutiny, found to be equally faulty. This "fault-finding" dialectical method, rightly understood and applied, yields one very positive and non-sceptical result. It persuades one not to be dogmatic in one's assertion or denial of proposition on the highest truths like *nirvāṇa*. Indirectly, it helps the inquirer, be he lay or sophisticated, to keep his mind open to the intuitively available light of truth. In the practical affairs of life this method dissuades one from travelling along the beaten tracks, thus promoting the spirit of question and search on one's own account. The Mādhyamikas like Nāgārjuna are bound to remind one of the Socratic method followed by Plato in his dialogue. The seemingly discursive logic of "fault-finding" is in reality rooted in and oriented toward truth-seeking.

The Buddhist committed to the view of the indescribability of freedom (*nirvāṇa*) in words (*anirvacanīyatā*) is often confronted, not surprisingly, with the question: "how then the truth-seer, Buddha himself, for example, could communicate his own realisation of the truth of *śūnya*, the Absolute, to his disciples and others who heard him?" The hidden (or not so hidden) implication of the question is clear. If one accepts the Buddhist dialectical logic, Nāgārjuna's, for example, one is put to serious difficulties in accounting for

the fact of *communication* of the basic issues of life and knowledge, freedom or *śūnya*. Those who think that the said difficulties are too serious to be surmounted doubt the very proclaimed facthood of the communicability of what *śūnya* is. Some related and very important questions also arise here. Is *śūnya* a correct synonym of *freedom*? Should we take *śūnya* as an absolute (*vikalpa*) leaving room for alternative construals of it or as the Absolute, the only ground of understanding of all different or alternative construals of it? Without going into the details of the questions and their possible answers, I assume here that *Śūnya* is Freedom and Absolute. I am deliberately using, S, F and A—capital words—to indicate the substantival, as distinguished from the adjectival (which easily comes to mind), character of the common reference of the terms. I am painfully aware that this (substantival/adjectival) sort of categorical distinction used in the context of purported description of the Ultimate is totally rejected by Buddha and his followers like Nāgārjuna. But then it may also be plausibly argued that this only shows the inadequacy of the conceptual thinking itself. Or one might even use stronger expressions, e.g., “conflict is inherent in Reason” and “antinomy is endemic to theoretical Reason”. Quite conversant with these objections and warnings, Buddha did not refrain himself from trying to communicate his own perception of truths, nor did Nāgārjuna cease to expound the Master’s positive teachings.

Problems of “saying the unsayables”, especially in the context of spiritual and value discourses, is not peculiar to one system of thought, country, or age. The sophists, for example, did not indulge in mere sophistry: deeply mindful of the futility of exclusive assertion or rejection of a particular position, they encouraged the spirit and art of dialogue between the defenders of different views on identical issues. Otherwise firm in defending their views against the attack of the opponents like the Buddhists, the Naiyāyikas paid serious attention to the problem of scepticism or doubt (*saṃśaya*). More cautious seems to have been the Jaina thinkers as is evident from their seven-valued logic (*sapta-bhaṅgi nyāya*) which ingeniously addresses itself to and tackles some of the problems that bothered Nāgārjuna. Kant’s treatment of antinomies (though it ends up with the questioned promise of resolving the same) shows, among other things, how categories and concepts, if not perceptibly deployed, give rise to contradiction in understanding instead of imparting clarity to it. Bradley takes immense pains to show that the categories of thought are so irremediably self-contradictory that the same prove to be intrinsically incapable of grasping reality and presenting it to the human mind. Having aired their reservations regarding the claims of discursive thought, it is educative to note that the great thinkers illustratively mentioned above neither give up thinking nor become silent. Nor are we advised to do so. The positive upshot of the sceptic’s and the dialectician’s critiques of epistemic optimism seems to be very modest but serious: viz., before conceptual reason, as distinguished from intuitive reason, sets out to

grasp or map out reality it must critically look into its internal resources and their reach. What self-critical reason is strongly advised to do is to refrain from going to an unknown station whereto the rails are yet to be laid.

It is no surprise to the informed reader that Nāgārjuna, even after uttering so many words of caution against the misconceived attempts to say something unsayable (*anirvacanīya*) about the unique reality of Buddha's *dharma-kāya*, has tried to capture its sense by some such expressions as "element of elements" (*dharmāṇām dharmatā*), their relativity (*śūnyatā*), "thisness" (*īdamtā*), "suchness" (*tathatā*), and "suchness of existence" (*bhūtatathatā*). Buddha and *nirvāṇa*, for Nāgārjuna, are interchangeable names for the same unique reality. One and the same world, in relation to cause, is phenomenal but taken as a whole and outside the causal nexus, i.e., under the aspect of eternity, transcendental. The dualistic Kant of the *First Critique* honestly tries to build in the *Second Critiques* an analogic-teleologic bridge to connect the causal-empirical realm with the uncaused-transcendental enabling him to move *freely* both ways so that *is-ought* dichotomy does not cast its dark shadow on the ethical, religious and aesthetic values. A strikingly similar dilemma one sees in the early Wittgenstein. Neither to Kant nor to Wittgenstein was available the many-valued or very flexible logic of Nāgārjuna. Even if it were made available to them, I suppose, they would not have accepted it on the ground that, given it, they could not be true to their commitments, right or wrong, and to science.

III

I think that the concept of freedom is central to the proper understanding of the individual's place in the world. The synonyms of freedom in use are numerous—enlightenment, liberation, liberty, *mukti*, *mokṣa*, *nirvāṇa*, etc. Though the meanings of the words are kindred, their difference has to be understood from the contexts of their use. Let us be clear right at the beginning that it is extremely difficult, if not impossible (at least in *theory*), to grasp, what *context* really stands for (including its range, reach and "feel"). Since it is with reference to (a given) context that we are called upon to ascertain the meaning of a word (used therein), we are really put in a *practical* dilemma when we find that the context itself is indefinite—its mode of being given as too indefinite to be used as a sort of (meaning-determining) criterion. Criterion is a consistent set of rules of use. In spite of its attending difficulties, we will be well-advised to remember that we make use of context for the purpose of *intuitive* determination of the intended meaning of the use(s) of a word. In a way this also shows the gap between the theoretical concept of freedom and its precise practical experience or feeling. Can freedom in practice be felt? Is it not by its very nature indefinite and imprecise?

One might say: context, like freedom, is ever elusive; but, even then,

we are obliged to make use of it. It is of no use, for example, to complain that "vanishing horizon" is no horizon at all. Though it recedes, keeps on receding, and though we cannot touch it, we do see it. To doubt this and raise some such logical question as "Is 'it' (of vanishing horizon) a proper name?" is a sign of what may be called misplaced love of logic. To give sense to any sort of doubt we need some presuppositions, some context, pertaining to the matter of doubt. Otherwise neither the question expressing the doubt nor the proposed answer trying to remove it can be clearly understood. Rightly understood, what here, in the context of "context" determination, is really under attack is not merely the paradigm of clarity or definiteness but the very possibility of successful communication.

"Have I been successful in communicating my idea to you?" is a question which is very much like asking "Am I free?" If this sort of questions prove problematic even in the case of the first person, one can easily imagine what might, but fortunately does not, happen in the case of the second person and the third person. It is primarily, not necessarily, from the behaviour—physical, verbal, etc.—of the persons involved in a particular process of communication that one has to understand and decide whether the communication was successful or not. At times, keeping silent we communicate. Silence by itself is no hindrance or obstacle to communication. But should we say that it is a medium or way of communication? Is silence as such communicative? Or is it so only within a given context, say, of questioning or asking or interrupted conversation?

Silence may be expression of knowledge as well as of ignorance, of agreement as well as of difference, and also of ambivalence. Without making reference to a definite context it should not be said in an unqualified manner "this silence betrays ignorance" or "that silence is the result of the unspeakable character of the knowledge in question". Of Buddha's silence it has been said that it cannot be construed as agnosticism or scepticism. Both Radhakrishnan²³ and Murti²⁴ interpret Buddha's silence on the question of *nirvāṇa* in terms of its *absolute* uniqueness, i.e., its indescribable and indeterminable nature. It must not be ascribed to ignorance on his part about what *nirvāṇa* is.

It is precisely this non-communicable (*anirvacanīya*) concept of knowledge that came under fire during the hey days of the European Enlightenment. Taking cues from the "presuppositionless" clarity of the Cartesian *cogito* and the Newtonian paradigm of mathematical language most of the leading thinkers of the time, as I have briefly indicated earlier, started defending (i) very optimistic theories of knowledge, (ii) law of inevitable historical progress, and (iii) the necessity of freedom of the individual. But the critics found later on that each one of the said three basic theses of the Age of Enlightenment was questionable. Hume led the attack and Kant found himself at least in partial agreement with him. By the end of nineteenth century foundationalism proved unsatisfactory not only in theory of knowledge

but also in mathematics. Philosophers started talking in terms of alternative foundation(s) and even non-foundation. Secondly, the proclaimed laws of history, on logical scrutiny, were found to be very different from the laws of nature. Without denying or diluting the cherished ideas of human freedom, it was argued, the so-called laws of history cannot be given the status of natural laws. The worse was yet to come: descriptive status was denied to the laws of science and gradually emerged several instrumental notions of science. Thirdly, the negative lessons of the French Revolution convinced many a libertarian that unless liberty is properly institutionalised and, when necessary, defended by lawful authority it would degenerate into self-defeating whims and caprices of the dominant group.

People started realising that (the light of) scientific knowledge, in spite of its precision, clarity, and communicability, was not enough to lead them on to the ideal of freedom. Science could not prove itself a good enough premium to insure the enjoyment of freedom. Rousseau's naturalism, Kant's accent on *practical* reason, and the transformation of the French Enlightenment and its revival into a romantic form in Germany, are, in different ways, acknowledgement of one and the same basic truth: theoretical or scientific knowledge by itself cannot make man really free. This sort of knowledge at best can make him controller of the forces around and without him. Unless the forces of willing and feeling within him are also somehow controlled, he can hardly enjoy true and uninvaded freedom.

That instrumentalist or pragmatic orientation of science is being highlighted for quite some time is due to no fault of science itself. The distinction and relation between *episteme* and *techné* have been known to the philosophers and scientists all along. The primary aim of science had always been, and still is, to try to solve problems by true and testable laws and theories. But the pressing experimental demands on what is claimed to be true, turned out to be mainly responsible for the increasing instrumental orientation of science since the days of the Copernican Revolution in Europe. "*What is there?*" and "*How are we justified in knowing and stating about what is there?*" are very intimately related questions. It is no wonder that several scientific philosophers, Nagel and Quine e.g., claim that their pragmatism is in no way incompatible with realism. These two philosophical brand names, when subjected to detailed logical analysis, prove misleading, at least in some cases.

When knowledge has no provably evident use-value, its truth-value is suspect and its communication problematic. If the acceptability of the truth-claim of some knowledge is made dependent upon some "external" criterion, proof, or set of rules, the responsibility of the concerned claimant is substantially reduced. He feels like saying: "I have given the proof or criterion for necessary decision-making and now it is for others to decide whether my claims are justified". Ordinarily, one does not make this sort of statement when necessary "proof" or "criterion" is not available to oneself. Even if

the necessary "proof" or "criterion" is available, one does not ordinarily make the above sort of statement if one feels doubtful about the nature of the cases where it is to be used or applied. The objects of scientific knowledge, generally speaking, are of such nature that they may be defined, dealt with, and communicated in terms of "criterion" etc. True, in some taxonomic sciences like botany and zoology, what we call borderline objects are there. But it is to be borne in mind that the scientist has a say as regards the "places" of "species" wherethrough the borderlines are to be drawn. In other words, even if the scientist admits that the world of science, i.e., Nature, has in it some objective *kinds*, his decision, apart from the available knowledge, has a role to play in determining their boundaries or borders.

This issue, i.e., the relative importance of the roles of knowledge and decision in determining the identity of objects and their correct communicability, assumes an acute problematic form when the objects in question are of the "inner" or mental world, i.e., when they are subjective in nature. Those who reject realism in philosophy of language and the idea of rigid and fixed relation between names and nominata, between statements and states of affairs, this problem appears in an added difficult form. The Buddhist theory of *apoha* or impact of words is clearly anti-realist. According to it, words have no direct, still less rigid, reference to reality but deal with concepts, which are purely subjective constructions. Name-words are not directly related with the discrete and transitory objects: their relation with the latter is mediated and made possible by their structural similarity giving rise to appropriate concepts. The seeming identity of the nominatum is to be understood in terms of conceptual identity and not ontological identity. Conceptual identity is based on *practically* repeatable configuration of relatable discrete entities. What is conveyed by name is no self-identical objective referent but merely an abstract concept. Regarding the connotation of universal terms the Buddhist is equally opposed to the Nyāya view that it is to be understood in terms of the objective relation obtained between universal (*jāti*), individual (*vyakti*), and configuration (*ākṛti*). Some of the pro-realist Buddhists like the Vaibhāṣikas also maintain that corresponding to a word-entity (*nāmakāya*) there exists in reality an objective generic character (*nimitta*). But the anti-realist Buddhists reject this theory of meaning on the ground that it clashes with their commonly accepted fluxist ontology. What is signified by a word is neither a purely subjective idea, which makes inter-subjective communication impossible, nor a purely objective reality, which is inconsistent with the basic tenet of momentariness. To explain the re-identifiability of the individual import of a word, the Buddhist repudiates the favourite Nyāya ideas of the universal-in-the-individual and the individual-as-defined-and-determined-by-the-universal; and he affirms that the individual import is somehow superimposed to an objective datum and to which it, i.e., the concerned word, negatively refers, firstly, by excluding other similar individuals and, secondly, by differentia-

ting it also from the objective datum which sustains it. So individuation of word-import is due to negation—double negation. The relatively permanent character of the individual denoted by a word is mainly due to its practical-causal efficiency and not ontological durability. Dignāga's negative meaning theory of *apoha* and *anyapoha* came under fire of the realists like Uddyotakara, Kumārila, and Vācaṣpati.²⁵

Their main objection seems to be that unless we accept that in conceptual knowledge objective reality is actually present, the hanging together of concepts by themselves can hardly explain truthful (or even causally successful) communication of factual (as distinguished from fictitious) objects among ourselves—persons of normally sound body and mind. The Buddhists like Śāntarakṣita have plausibly argued to meet the said objection in this way. The conceptual network that makes inter-subjective communication possible and successful do have extra-subjective reference and it is to be remembered that we all operate with the same network and under substantially similar causes and conditions. Ideality of the objects given phenomenologically, Husserl, like the Buddhist, says, is no hindrance to our co-sharing in the actual life-situation. It is no surprise to me that Stecherbatsky refers to Husserl while discussing Dharmakīrti.²⁶ The Absolute Reality that is kept hidden from us by the said causes and conditions makes no difference to our common perception of the empirical world. That our talks about this world are mutually intelligible is evident from the satisfactory outcome of our talk. In other words, the empirical world is capturable in the available network of our concepts. Since words are working, we must not waste time in chasing the metaphysical questions like “whether the picture of the reality we are presented with the available concepts is true in the higher sense?” or “can these concepts tell us clearly what *nirvāṇa* is like?”

In fact the reason why the Buddhist logicians and epistemologists like Dignāga draw no line of distinction between nominalism and conceptualism and delineate the theory of names under and within that of concepts seems to be this. Right from the days of the Vedas to Vedānta and Mīmāṃsā, one notices a highly metaphysical theory of language which endows name-words with an extraordinary power (*śabda-śakti*) of direct self (meaning)—revelation. If this theory is believed to be correct, we have to admit that meanings of nameables are directly revealed in names, and that the theories of momentariness and causal contingency do not apply to the case of the said relation. Needless to elaborate, that to pro-empiricist and anti-metaphysical Buddhists, this theory of language in general, and of names in particular, are thoroughly unacceptable.

Once the paradigm of communication is brought down from the metaphysical level to the empirical or scientific, certain “things” are automatically excluded from the realm of speakability. Using his dialectics, Nāgārjuna tells us why one cannot speak about *nirvāṇa*. By intuition or *prajñā*, he concedes, one may know what it is, but this concession does not mean much,

for what of *nirvāṇa* is known by *prajñā* is not communicable (at least not by language as it is ordinarily understood.)

By refusing to cross the great divide between the speakables and the unspeakables with 'the useless' help of Nāgārjuna-type of dialectics, and, in a way, committing to a sort of dualism stronger than even Kant's, Wittgenstein, I feel, finds himself completely unable to speak about things like God, good, happiness, death and immortality. He has his own (non-dialectical) reason, called a theory of two-valued and truth-functional logical language, to explain his inability. Even the rigidity of relation between proper names and objects and the picturesque character of the relation between elementary propositions and facts of the world do not help him in the matter. One might say: it is because of the proclaimed *rigid* claim of the proper names and his insistence on the *picturesqueness* of the propositions that he fails. The limits of his language are the limits of his world (*Tractatus Logico-Philosophicus*, [now onward *TLP*] 5.6). His language is essentially logical and the structure of the world is also so. This language by its very nature is unable to say anything about what is *not* in the world. What is not logically properly namable and picturable in any way—neither individually nor as a truth-functional complex—cannot be regarded to *be* in *this* world. "Beings" of other worlds, if any, are not expressible in or even hinted at by the language available to Wittgenstein. Given his language, he is obliged to state: *In* it there is no value...It must lie outside the world (*TLP* 6.41). Ethics and aesthetics are transcendental (*TLP* 6.42). Death is not a part of or event in life. Again, given his language, one can not draw a tenable line of distinction between the life mortal and the life eternal. His observations on the relation between phenomenal world and the transcendental world are characteristically intriguing. Death, for instance, put an "end" to a man's life only in the comparable sense that the end or boundary of a visual field is the end of what is visible. What is not visible for one person from a given point of view may be visible for him from another. Realistically speaking, they seem to fail to see that several other fields are continuous and, therefore, are equally possible objects of visual perception. Simply because one cannot see the distant field, the latter should not be regarded as "beyond the field of visibility for ever". The eye cannot see itself. The seer can see only his reflection, not himself as himself. Wittgenstein's argument (6.4311) here strongly suggests that he is inclined to believe in the life beyond death but, given his logic, he finds no way to assert it (as something in the world). Life cannot encounter its own end, i.e., death. They are logically separate.

The main point to be borne in mind is that Wittgenstein's world is a creature of his language or, one might say, of this world nothing can be said what is not provided by the nature and rules of his logic. His language does not permit him to speak of the soul or the subject (5.5421 and 6.4312). When he refuses to speak about the soul as conceived in the "superficial psychology", one gets the impression that he is not opposed to the conception

of soul as such, provided the superficiality "of the present day" psychology is avoided. Similar ambivalence is evident in his attitude toward the question of immortality of the soul. The "deep" sense of "I" is to be gathered from such of his expressions as "my language" and "my world". If no sense whatsoever could be given to "I", its possessive form "my" remains empty. But Wittgenstein says that it is not empty. In some sense, somehow one's language is related to one's life and world. It is by will, in and through one's centre of will, one gets somehow related to, and involved, in one's world and life. But by will one cannot go beyond one's language or world and see or show what lies beyond it. What "lies beyond" it can be imagined on the basis of will and imagination, e.g., the soul and of its immortality, and may be an object of experience but not of knowledge (in Wittgensteinian sense). If the soul survives death, Wittgenstein's point is that the supposed survival does not logically answer any of our moral or spiritual needs. But our attitude, because of the said sort of experience, may change and thus acquire value.

That Wittgenstein recognises the issues of life and death, of value and the beyond, is evident from his decision to mention the subjects even though he finds it impossible to solve the "problems" pertaining to them. In fact, according to him, these problems cannot be clearly formulated at all, still less answered, convincingly. Wittgenstein observes: "When the answer cannot be put into words, neither can question be put into words" (6.5). It is interesting to note here that Wittgenstein is insisting primarily on the formulability of answer in words, and that his main concern is not the formulability of the question in words. Evidently, he refuses to entertain a question if it cannot be answered in his chosen language. One might plausibly argue against Wittgenstein on this point and say: this attitude is anti-scientific. The scientist does entertain questions and problems even when those are not immediately answerable or soluble. To shut out the problems and questions on the ground of their non-formulability in a particular language does not appear very reasonable. On the contrary, it betrays an unnecessarily restrictive view on the questions of life and death.

When Wittgenstein, later on in his own life, retreats from what he earlier called "superficial psychology" and develops a very ingenious psychology or philosophy of mind, the said question receives no more illuminating treatment from him. True, ordinary language is more rich and resourceful than logical language for the purpose of expressing and communicating values and such "transcendental" objects as God, Soul and Freedom. Even then, contrary to his own expressed intention, it seems to me that Wittgenstein does not allow to leave the worlds in their "natural habitats", i.e., original contexts, and speak out for themselves therefrom.

Some strong criteriological considerations weighed heavily on his mind. And, therefore, even in his later philosophy he insisted so much on the compliance of rules of use. His "forms of life" are so definitely intended to be bound by "rigid" rules that they could not have in them anything *unruly*.

In the *Tractatus* Wittgenstein refuses to entertain questions which are not answerable in terms of his logic. Somewhat similarly in *Philosophical Investigation* (PI) and other later works, he refuses to recognise meaning of the words which cannot be definitely determined by *appropriate* rules in the concerned form of life. Rules or the criterion constituted by them are as demanding as the requirement (in *Tractatus*) that language picture reality. This comparison may sound a bit unfair to the later Wittgenstein. Perhaps partly it is, but the point I am trying to make out seems to me valid, and it is this. When "States of Affairs" (*Tractatus*) and "Forms of life" (PI) are conceived as very definite, with sharp boundaries around them, neatly picturable or amenable to well-defined rules, they cannot be comfortable habitats of values and transcendental objects. It has been observed by some commentators like Stenius²⁷ that there is an essential tension between empirical realism and transcendental idealism in the writings of Wittgenstein. This is strikingly and systematically similar to and, therefore, bound to remind one of Kantian tension between phenomenalism and noumenalism. In Kant's scheme of thought, the lower level cognitive unities—of intuition, of imagination and of understanding, without the transcendental self, the unity of apperception, are mutually unrelated and jointly unable to make phenomenal objects possible. The Cartesian notion of thinking substance is not available to Kant. This is largely because of Hume's criticism of the soul-substance theory and his own view that the self is elusive for ever. Taking the cues from Hume, Kant concludes that the self, by its very nature, is irremediably subjective and, when it is available as object, it ceases to be transcendental and is reduced to the level of *embodied* other empirical objects. To the extent we are embodied, we are a part of the empirical world and subject to the laws of causation and thermo-dynamic mutation. Somewhat in the similar vein, Wittgenstein speaks also of the empirical and causal situation of the human body. Unlike the phenomenologists-existentialists like Heidegger, Sartre and Merleau-Ponty, dualists like Kant and Wittgenstein are not prepared to accord a special ontological status to the human body as a sort of humanised nature or naturalised man. The underlying argument of both the dualists is similar. The human body as a part of nature, Kant thinks, can not be truly free; but freedom is the pre-supposition of all values.

Prompted by analogous, not exactly identical, considerations, Wittgenstein finds no place for the soul, or the self, or the subject in the empirical world, the sphere of natural sciences (*TLP* 5.641), for logical philosophy sets limits to what can be thought and, in the process, to what cannot be thought (*TLP* 4.114). Interestingly enough, Wittgenstein admits that what cannot be clearly said in logical language can well be *signified* (*TLP* 4.115). This significance primarily pertains to objects of feeling and willing and not those of knowledge. Thus one finds that Wittgenstein draws a line of sharp demarcation not only between the transcendental and empirical but also

between the cognitive and the non-cognitive (e.g., feeling and willing) aspects of the subject. If he is persuaded of the non-availability, elusiveness of the subject, it is not clear to me how he can meaningfully draw a line of distinction between both within and without the self. First, to whom and how the distinction between the empirical and the transcendental, between the namable objects and unnamable transcendental subjects, is presented, and by whom the same is understood. Secondly, it is not clear either how and by whom the distinction between the knowing self, on the one hand, and the willing and feeling self, on the other, is understood. These questions are all the more relevant because it is clear from his writings that he accepts the extensional or the pro-Humean stream-like view of the self or the subject. In the absence of a transcendental self and in order to be consistent, Wittgenstein is required to concede that the discrete and the passing thinking is the thinker. But he does not say so.

On the contrary, his extensional language puts his concept of self to a sort of zero point where it simultaneously is and is not related to the empirical world (*TLP* 5.6 and 5.64). His very claim that the "metaphysical self" sets limits to his world is unintelligible without assuming that it is somehow presented to some non-metaphysical self. One might say, quoting Wittgenstein himself, that this is through a sort of ownership of the language, which enables one to speak about the world in a *particular* way, that one can meaningfully say "my world...". "What brings the self into philosophy is the fact that the world is my world". If "the world is all that is the case" (*TLP*-1) it is bound to be public, i.e., intersubjectively available, capturable and communicable in and through one and the same language. In that case it is difficult to understand how "the world" can be either mine, or yours, or his except in a metaphorical sense. It seems, then "my language", "your language", etc. are howlers at worst or identically framed mirrors at best. The fact that the world (of *TLP* !) is inter-subjectively communicable seems to discount the howler-language hypothesis. But Wittgenstein's obsession with "my language" rooted in his concern for values forces one to fall back upon a metaphysical or non-existential realm of solipsism. I am "shut up" in my language of the world and you are in yours. Obviously this is not a comfortable and acceptable position for Wittgenstein. And, therefore, understandably, he tries to clarify his difficult position. The main thrust of his argument is somewhat like this. When he uses the word "my", he thinks he can use the word "your" or "his" as well. For the purpose of *logical* communication, I, you and he, i.e., we, all, are at par. For our logic, according to Wittgenstein's view of logic, is the only good logic available to us. Our logic being the same, what we can communicate through it is also same. But there are certain things which we can *mean* but cannot logically think or communicate. "For what the Solipsists mean is quite correct: only it cannot be *said*" (*TLP* 5.62). It is interesting to note that, according to Wittgenstein, the limits of his language stand for the limits not only of his world but also those of others.

The language meant for communication being same, its limits are bound to be same. Then this argument is extended to the notion of the soul. He finds no good reason to draw a line of distinction between his soul and the souls of others. "There really is only one world soul, which I for preference call *my* soul and as which alone I conceive what I call the souls of others." (*Note Books*, 23.5.15). In this view, Wittgenstein claims to have found "the key for deciding the way in which solipsism is the truth". About the truth of solipsism he is not in doubt in the least. But he is painfully aware of the unthinkability and unsayability, i.e., non-communicability, of this truth. To doubt is to develop or entertain an attitude. I can easily feel that others have their souls, their own languages, but for me, given a particular language, in this case Wittgenstein's, to show the same is impossible.

In one sense, in the empirical-phenomenal sense, Wittgenstein's world, because of its thinkability and sayability, can be successfully communicated. But in a transcendental or metaphysical sense, this sort of communication breaks down. But that does not rule out the possibility of another sort of communication. The language of thought is the language of science (as understood by Wittgenstein) and sharable by all alike. But that world, being limited as it is by the rules of its own semantics, of namability of objects, and of picturability of states of affairs, cannot rule out the existence of other world(s), e.g., the world of values presented to one's feeling and willing. The uniqueness of one's life does not clash with the uniqueness of others' lives. But because of its very nature, the uniqueness of life is not "convincingly" communicable. It can only be meant, suggested or indicated. This kind of communication may appear weak compared to the other, the logical kind of communication. But, rightly understood, most of us live primarily by the "weaker" sort of communication. The "stronger" sort of communication is primarily meant for *showing* and *proving* and not for living—living according to some values or in the pursuit of some values. As a matter of fact, interestingly enough, in our practical forms of life the "weaker" kind of communication proves stronger than the "stronger" kind of communication. In brief: our life is shaped more by value considerations than by scientific ones.

The difference between the philosophy of the earlier Wittgenstein and that of the later Wittgenstein is well-known and has rightly received careful notice of the commentators and interpreters, both sympathetic and critical. On the issue of solipsism, it has often been argued that Wittgenstein's position as stated in *Tractatus* has been refuted by himself in *PI*.²⁸ Like Idealism and Realism, Wittgenstein claims that Solipsism is a metaphysical theory. The main tools used by Wittgenstein to refute his earlier view are his new notions of proper names and propositions and the denial of the privacy of experience. This statement is in a sense undoubtedly correct but one must carefully note the hang-over of *Tractatus* on *PI*. In connection with his effort to refute solipsism, this undying legacy of Wittgenstein's thought may be indicated.

In *Tractatus* one can easily note that metaphysical theories have been *meant* and extensively *alluded* to. Time and again he has used philosophy as a critique of language and tried to show that certain things can be said in and through truth-functional logical language and certain things, about which he himself was not in doubt and in which he was deeply interested, could not be said. He takes immense pains to explain why certain metaphysical experiences, though felt and willed as values or dis-values, good or evil, cannot be expressed. In addition, he also says that ordinary language must not be changed or revised. For it has its own justification. In *Tractatus* his main interest is not ordinary language but the anatomy of science-communicating language. Even there he is careful to point out the inadequacies or limits of this language for the purpose of communicating certain non-scientific, i.e., metaphysical and axiological themes. In *Tractatus* the privacy paradigm of experience, though recognised, has not been elaborated. In his later philosophy the attack on the privacy paradigm, to my mind, does not improve the situation very much. His arguments in *PI* (402 and 403) trying to do away with the distinction between "my pain" and "L.W.'s pain" and to treat at par the experiences of the first persons, on the one hand, and those of second and third persons, on the other, do not, rather cannot, I think, remove the irremediable privacy of experience. What at best he succeeds in proving is to state clearly *why* that sort of experience cannot be meaningfully talked about and communicated. In other words, he is extremely criterion-conscious in *PI* both for the purposes of recognising endless richness and nuances of ordinary language and arresting the threat of possible semantic anarchy or rulelessness. This is bound to remind one of his predicament with solipsism and questions of value in *Tractatus*. There the rules of his ideal language prevent him from saying about his non-scientific, non-namable and non-picturable experiences. In both the cases I find Wittgenstein is exclusively obsessed with the ideals of showing, proving and clearly saying. And in both the phases of his life he remains equally sensitive to metaphysical issues, the issues of life, death and values.

While talking about his knowledge and the purpose of life, Wittgenstein affirms that the meaning of life is problematic and it lies outside the world in which he, as an embodied being, is obliged to *live*. Life and the world are same. One might say: life is *how* one defines his attitude to what is there in and beyond the world. His knowledge does not go beyond the world but his will, marked by good or evil, succeeds in a way in penetrating it. Like the meaning of the world, good and evil fall outside it. The meaning of life, i.e., of the world as well, is what he proposes to call *God*. The world is independent of one's will and does not respond to one's aim or prayer. Like Kant, Wittgenstein seems to be inclined to think that the world is not only independent of but also indifferent to our will. Even then we seek and talk about the meaning of life, it is a sort of *prayer*. Since by will we cannot change the world, we, for our own happiness or freedom from pain, can only try to make our

will as independent as possible of the world in which we are obliged to live. We may *renounce* the world; but cannot change the course of its happenings. (*Note Book*, entries from 11.6.16 to 8.7.16).

I find a striking similarity between Kant's notion of goodwill, good by virtue of its independence from the worldly influences, and Wittgenstein's notion of what may be called moral will. Wittgenstein is also inclined to make moral will independent of the happenings of the world, including those of the body which are subject to the laws of the world. But while Kant assigns a duty-fulfilling role to will, Wittgenstein encourages an attitude of renunciation and *contentment*. He is for living a life of contentment. In the world he sees no presence of God. Will's "penetration" into the world does not alter the course of the latter. "To believe in God means to see that life has a meaning". To believe in God is to witness an inexorable course of *fate*. If we can truly recognise the causal structure and the inevitable nature of the world, *Samsāra*, our independence or freedom, *nirvāṇa* becomes genuine and, in that case, we do not have any fear of death in us. Death can never visit life. Only its shadow as fear darkens our life. A life is bad when it allows itself to be darkened by a rootless fear.

It is very instructive to note that while Wittgenstein spends so much time and devotes so much attention to a theoretical picture of the world and of its knowledge, he never fails to take sustained interest in indicating the serious issues of life which do not fall inside the world and are not objects of knowledge. He speaks of *conscience* as the *voice of God*. What this voice conveys to him is neither thinkable nor logically communicable. And yet he seems to be very anxious to hear the voice of God. The questions pertaining to God, willing of good and feeling of the beautiful are in the nature of "how" and not in the nature of "what". These are not questions of fact or of science but of aesthetic and ethico-religious sensibility. The questions relating to *what* makes an attitude aesthetic and a sensibility ethico-religious, though very pertinent, cannot be gone into details here. The connections between scientific facts and value discourse are indeed very complex.

My reference to Wittgenstein and, through him, to Kant remains incomplete without the perceptive views expressed on the subject by Schopenhauer. All these thinkers addressed themselves to the problems of value-fact connections with critical richness. In fact, Wittgenstein's acquaintance with Kant and use of his ideas are essentially mediated through Schopenhauer. According to the latter, reality is not representable either picturesquely or even very clearly through concepts and categories. What we have of the world in the representations is always coloured and oriented by will. Will has two aspects in it: phenomenon and thing-in-itself. The individual phenomenon of the will has its origin and dissolution in time. But as thing-in-itself it is not affected by it and the causal claim. Nor is it co-related to every object of knowledge. The will to live is the primordial subject and it is in that capacity that man is not only timeless and beginningless but also endless or

immortal. "His exemption from death, which belongs to him only as thing-in-itself, coincides for the phenomenon with the continued existence of the rest of the external world".²⁹

Our primordial will to live as such is not *cognitively* available to us. We have it only in and as the body. Though death is unknown to the will-to-live as such yet we, as objective and embodied representations of that will, are seized of by the fear of death. The ground of this really ungrounded fear is "our" attachment to the body. It is a real-unreal attachment. Ontologically it is not there, i.e., not factually traceable. But it is very much there in our feeling and attitude.

Schopenhauer's difference from Kant is primarily to be understood in terms of the former's view that Kant's notion of the object of perception is incoherent and untenable. To speak of "object of perception" is to imply that object has a presentable objectivity of itself accomplished outside the human body-as-will, without being presented to it and interpreted by it. Schopenhauer also rejects Kant's notion of concept as available in finished form and meant for application and use. He is against understanding reality via concept. He is for grasping it directly i.e., perceptually, not conceptually. Schopenhauer likens Kant "to a person who measures the height of a tower from its shadow" and himself to "one who applies the measuring-rod to the tower itself." He accuses Kant of skipping over the richness and the multifariousness of the world of perception. "Philosophy, therefore, is for him a science *of* concepts, but for me a science *in* concepts, drawn from knowledge of perception, the only source of all evidence."³⁰

Schopenhauer's starting point of philosophy is evidently subjective and what he calls anti-materialistic. But his is an intriguing sort of subjectivism. It highlights the unity of man through his inner nature, i.e., will, with the world. Only the phenomenal appearances of the world are available in representations or ideas. Time is only a form of representation of the phenomenal world. But time itself is eternal. Death is said to be "the temporal end of the temporal phenomenon." And when time is taken away, life knows no end. In other words, in the timeless frame of reality life and death interpenetrate. One might even say: they are identical. Like the Buddhist, Schopenhauer in a sense is inclined to agree that *samsāra* is *nirvāṇa*. We are simultaneously subject to and yet free from the causal chain. The subjection of our knowledge of the world to the form of time represents it as transitory, and destructible; but in their true nature they can be taken to be eternal. Repeatedly referring to Hinduism and Buddhism and the ideas of Plato and Plotinus, one of the basic points that Schopenhauer tries to make out is that time is an *image* of eternity and body is an image of the will-to-live. We are afraid of death because we think that we are identical with our images and fail to realise our primordial will. I am afraid to think of my own physical destruction or non-existence. But if I reflect on my non-existence as such, it is not fearful. I was non-existent before I was conceived in my mother's womb.

Why am I not afraid to think of that non-existence of mine? This reflection brings to light that our fear of death and craving for immortality is essentially body-based, i.e., due to our attachment to and identification with the body. According to Schopenhauer "it is I or ego...by which the world is first brought about, and for which alone the world exists".³¹ It is in and through this *I* or ego that the proclaimed "destructibility of our true nature" and "the identity of macrocosm and microcosm" become intelligible. It is therefore through this point of *I* or ego that Wittgenstein speaks of our will's ability to penetrate into the metaphysical or transcendental without leaving the empirical or phenomenal behind. It is at this point that the two realms meet. Schopenhauer's answer to the "riddle" is: "the centre of all existence (*I* or ego), this kernel of all reality, is to be abolished, and yet the world is to be allowed to go on existing".

If this view is accepted, both the question of immortality of the soul and that of scientific world appear in a favourable and emotionally satisfying light. Understandably, this view was not available to Wittgenstein, at least not in a straightforward manner. Nor am I sure whether this is the truth. The connection between the metaphysical and the empirical, or between the provable and the perceptible, is not a matter of proof or demonstration. The dualistic difficulties have been expressed in various ways. Such pairs of concepts as value/fact, teleologic/mechanical, free/caused, and practical/theoretical are expressive of this ambivalence or essential tension of human life. The experiences of our life do not at all lend themselves to clear formulation and communication. That is why in the realm of values we simultaneously find satisfaction and controversy—satisfaction of experience and controversy over the possibility of judgement. Analogously, it may be pointed out that the logic of theoretical discourse proves much less controversial than that of practical one. In brief, it may be said, in the theoretical world of science we achieve a large measure of unanimity, whereas in the practical world of value-experience and -exchange we come across a variety of views. By this I do not suggest that judgement is absolutely non-available in the sphere of values, e.g., aesthetics, ethics and religion. Since human life has an invisible and yet effective unity of its own, our cognitive inclinations successfully penetrate the value-laden sphere of our life.

The sceptic's dissatisfaction over the lack of clarity, provability and communicability of certain types of experience, especially the axiological ones, is rooted in his non-sceptical commitment to the theoretical paradigm of knowledge. Even within the area of science when we move from the observational terms to the theoretical ones, the theoretician's dilemma becomes manifest. Both in the theoretical and the practical spheres of experience we are obliged to go beyond the given and feel inclined to explain or enjoy the given in terms of what lies beyond it. For example, in framing scientific explanation we relate, arrange and systematise the given experiences in terms of certain theories which have survived some tests, proved their mettle and are more acceptable to the concerned community. Here when doubt

arises, it is sought to be removed by well-defined and publicly sharable experiences.

In contrast, in the sphere of moral, aesthetic and religious experiences, our primary endeavour is to entertain, enjoy and, at times, even suffer the experiences and not to analytically disentangle their conceptual infrastructure and examine their consistency or lack thereof. Further, in the latter type of experience, our main aim is not one of proving or communicating. When we see something beautiful, our primary disposition is to enjoy it, sharing this experience with others is of secondary interest to us. But in a sense it is true that our ability to see something beautiful is itself sustained by some vaguely defined conceptual network. Negatively speaking, in the absence of that network we human beings, like other animals, would have been incapable of having and enjoying aesthetic or religious experience. But the conceptual network sustaining aesthetic and religious modes of experience and discoverable on reflection, is not primarily operative in the scientific mode of our experience. There some well-articulate concepts and categories are consciously employed and our own experience, at that level, has an explicit *other*-orientation, i.e., is marked by an intention to communicate it to others and, on demand, prove it successful. Our preoccupation with the idea or representation of reality, when it gets better of our feeling of reality and our yearning towards it, lands us in scepticism in relation to the objects of feeling and willing. If the paradigm of cognition is uncritically or mechanically transferred to, and imposed upon, the paradigm of feeling or that of willing, we are bound to get stuck up in some sort of what may be called intellectual confusion. For example, freedom or its absence may somehow be experienced but cannot be convincingly communicated. What I mean to say is this. If I say "I am not free" and someone is not convinced of the truth of what I say, I have no logical means at my disposal to convince him. From some of my utterances and behaviour he may be persuaded of the truth of my statement. But if he feels otherwise, I remain helpless. It is not an infrequent experience for many of us that in complex and delicate practical affairs our communication is not as successful and effective as it generally is in the case of the exchange of scientific ideas through well-established logical and experimental methods. When by practical affairs we mean, among other things, religious and aesthetic experiences, the problem of communication presents itself more acutely and persistently.

I have already mentioned earlier that when it comes to the question of talking about liberation or *nirvāṇa*, many saints (*muni*) and philosophers realise the futility of normal discourse and prefer to remain silent (*mauna*). This silence is to be distinguished from the legendary sceptic's silence. The cognitive sceptic feels inclined to remain silent primarily because of his realisation that whatever he is able to affirm or deny is bound to be so questionable that it is practically advisable to keep silent. But when Buddha decides to keep silent on the nature of *nirvāṇa*, his underlying consideration is different.

He feels that the richness or fullness of experience of *nirvāṇa* is such that words by their nature are incapable of expressing it. It is analogous to the musician's silence, silent gaps or spaces, in between his sonic articulation of a symphony or *rāga*. Pauses between ordered or harmonic sounds, though silent, weave or contribute to weaving a musical pattern, and are meaningful and communicative.

Non-existence of the self before birth, its temporary existence and its non-existence after death...are somehow continuous,—“continuous” in the sense that these are co-present representations in one's awareness. When Vacchagotta asks the Buddha if the self exists, the latter remains silent. Asked by Ānanda as regards the cause of his silence, he explains his reasons clearly. To affirm the existence of the self might be understood as acceptance of the doctrine of the permanent self, to deny the self would amount to endorsement of the view that the self, without purification necessary for liberation, is totally destroyed on death and is not reborn. Further, to affirm the existence of the self might lead Vacchagotta to believe that the empirical world is not really not-self, while to deny it altogether might offend his common sense and put him into confusion. It is interesting to note that Buddha's arguments are not conclusively probative but merely suggestive. They are basically practical or pragmatic in character and indicate Buddha's inability to express in words his own view on the nature of the self. We also note in the Malunkyaputta dialogue of the Majjhima Nikāya that Buddha, pressed by the disciples to answer the riddle of the world limited by space and time of the continued existence of the enlightened man after death, explains why he prefers to remain silent on the issue. He does not think that it is a part of his duty to instruct his disciples in these matters. “He is instead a physician who gives such instructions as lead to the freeing of man from bondage, and informations on the points in question tend in no way to the desired end, therefore not imparted by the matter”.³² It is clear from Buddha's words that on the issues of self and liberation the information or knowledge imparted by words are useless, if not misleading. These are the areas where successful exchange or communication calls for a different approach. It has often been very rightly said that the best form of education is provided by influences and examples and not words of mouth and lecture. Needless to add, it is not easy to create that influence or set that example which can prove its communicative competence. Communication has its levels. In oral communication we need an utterer-hearer situation—someone to utter “something” and some other to hear “it”. But in this sort of communication there is no guarantee that “something” uttered this way is identical with what is comprehended of it by the person communicated with. Apart from the physical noise-loss involved in the process of communication, there are the possibilities that (a) the hearer may fail to grasp the intention of the utterer and (b) the former may put his own interpretation into what he hears. In a Husserlian way one might say that in every utterer-hearer

situation there is an element of identity intended by one but not actually perceived by the other. In the other's perception this identity is bound to penetrate.

Secondly, we may think of a two-person non-oral communication which is not necessarily marked by acts of uttering and hearing. In a situation of deep delight or that of deep distress or tragedy, for example, a lover and his beloved ordinarily do not, in fact need not, talk to communicate their experiences. This two-person model of non-oral communication, with some modification, may be easily expanded and made more comprehensive. But the critic may raise the question: "In the said example, the content of communication has already been surreptitiously introduced into the so-called non-oral situation and, therefore, the possibility of its communication without words has been thereby ensured". The critic's point that the proclaimed redundancy of words in the situation is spurious may be shown as untenable and based on misconception regarding the relation between the form and content of human communication. The content of human communication is available even in its unuttered form. It is our common experience that our grief or joy is known to others even if, it is not announced or uttered. True, in this sort of cases there is the possibility of misunderstanding or misinterpretation. But that does not disprove the main point, namely, the very identifiable (pre- or non-communicative) existence of the content of experience. Nor does it seek to totally overthrow the idea of the privacy and subjectivity of experience. The possibilities of misunderstanding and misinterpretation are only illustrative of communication-failure and do not prove non-existence of the content to be communicated.

Schopenhauer draws a distinction between "science *of* concepts" and "science *in* concepts". Some components of scientific knowledge cannot be communicated *by* concepts but have to be grasped *in* them. Once we recall that the scientific mode of knowledge is secondary in character, i.e., parasitical upon and sustained by non- or pre-scientific experience of life, it will be easy for us to understand the idea of unuttered but co-shared content of experience.

In this connection we may recall Heidegger's claim that state-of-mind and understanding are existentially equiprimordial.³³ The content of our experience is thrown *out* of our being and can therefore be interpreted, shared and understood by others. Meaning is co-sharable even before it is linguistically articulated. In a sense, meaning, like man, stands disclosed. Language is a totality of words and has a life of its own. Although we make use of it in different ways, yet our uses do not destroy the life of the language in the world. By our action, inaction, intention, silence, etc. we may throw into language some added contents but all these we succeed in doing as enveloped by and living *within* language. As a symbolic system, language penetrates into our neuro-physiological system, interrupts and interprets its incomings and outgoings. Given the above view of language, the concept of communication acquires more depth and comprehension. It is not to be construed

merely, or even primarily, as an information-conveying process. Rather, Heidegger claims, communication is primarily an experience of co-sharing. "Communication is never anything like a conveying of experiences, such as opinion or wishes, from the interior of one subject into the interior of another. *Dasein*-with is already essentially manifest in a co-state-of-mind and co-understanding." In oral communication what constitutes communication is not only what is talked of but also the act of talking itself. Strictly speaking, in a real life-situation the two are hardly distinguishable. The communicative unity of talk and what is talked of are clearly evident in dramatic arts.

Thirdly, besides oral and non-oral communication, the other most important mode of it is silence. Silence is a part of language and not dissociated from it—does not stand outside of it. It may look like a dark and rugged island encircled by a boundless and bottomless sea but in fact it is always supported by submarine firm territory of unheard and unspoken language.

Language has its different levels of functioning, communicative and non-communicative. That language is intended to be communicative is obvious and need not be stressed at length unless, of course, we are very interested in bringing out the variety of its nuances. But, the non-communicative language does not cease to be a language is a point which deserves our special attention in the context of our understanding of silence as a mode of communication. Take the case of our communication with the persons who are deaf and dumb. To them we do not talk. But *with* them we communicate without talking or using words. They can feel as well as know what we intend to communicate. Our communication with them comprises not only thing-words but also value-words. Even the shades of difference in the value-discourse are communicable to and sharable with them. Interestingly enough, this situation of successful communication, viewed externally, may appear silent—a silent situation. I say "silent", because it need not necessarily be the case. A silently communicative situation as described above discloses its human and meaningful character very naturally, but not always very correctly or exactly. In other words, the possibility of diverse interpretation is never completely ruled out.

At times we find ourselves in situations where we speak or hear or both but do not communicate. We may talk at length in a diplomatic way giving the impression (at least to the uninitiated) that one is communicating something and expressing one's self. But the initiated here may well understand that the speaker's diplomatic words are "idle" or non-communicative. Strictly speaking, the said idle character of pseudo-communicative words has a message of their own, namely, the speaker is not meaning what he is saying by using the words. It is in this sense that one is justified in affirming that words by the very nature are incapable of remaining idle in a *discourse*.³⁴

Let us think of another situation. I am placed in a rowdy and alien

crowd where almost everyone is ceaselessly talking, and very few are interested in listening to what is being talked about. One may think it is an intensely communicative situation. But most of us know that in a gay party of the sort people are more interested in talking rather than in listening, still less listening with interest to what is being talked about. In this sort of talking situation, the words exchanged are in most cases really idle i.e., not intended to mean much. On some occasions, I have seen one or two persons standing quietly aloof, almost deliberately withdrawn, from "their" company and maintaining their significant seclusion and silence. To me at least, their silence appears not only meaningful and communicative but also refreshing and welcome. Silent persons amidst a noisy and talkative crowd always appear to me very successfully communicative. One might say that those silent few are deeply engaged in some soliloquy on their chosen themes which have nothing in common with the talk going around them. In silent soliloquy man represents himself to his deeper self and yet the situation spills over the brim of the privacy of his experience. Otherwise, the soliloquous character could never be available to us to comment upon. Our *anxiety* to understand what is going on in the minds of the people who are dispositionally reticent is not entirely rootless. It rests on some complex cues following which we often succeed in getting into their mind, i.e., in understanding them. The point to be mentioned here is: these cues are much weaker and flexible than Wittgenstein's rules.

Similar conditions more or less apply to the cases of *care* and *concern*. We do care about and are concerned with what is going on in the minds of persons whom we love and like or who are our sworn enemies. Care and concern not only are founded in experience but also have in them promise-lines, however faint, following which exploration or investigation may be advisably undertaken.

We know of many saintly persons who are reticent and often live a very secluded life. Even then we find that they command respect and devotion of a large number of people. Though with the latter they do not frequently converse or, as we know in many cases, do not converse at all, their views on different matters are known to their followers. The communication between a silent person, whether a saint or a deaf and dumb person, and others shows, among other things, that the uttered language is not an indispensable means for successful communication. Language has a life of its own and, in that sense, is an institution. At least it may be understood thus. Without making explicit reference to how it is used in speech, acts and writings, language may be studied. Secondly, language may be understood, perhaps more profitably and promisingly, in terms of its various uses. De Saussure, Sartre, Merleau-Ponty and many others have exploited this distinction between the various levels of language which may be differently lived. In its institutional form language holds back to itself whatever it has in it. One might say: that is the in-itself form of the life of language. Here it

is captured in its basic or deep structure. In this form language hides itself from us. Yet this, perhaps, is not exactly the case. Language cannot be what it is supposed to be if it completely succeeds in hiding itself from us. Even in its hidden form it works, discloses itself out to its potential users. Or, it degenerates into something else, into some other forms and meanings—other than what it was at a given point of time. By its very nature language flows and works and does not stand still like a rugged rock.

The in-itself character of language is indicated by Wittgenstein when he says that a proposition has a sense of its own independent of its being affirmed or denied, i.e., used some way or other. (*TLP* 4.061 & 4.064). To bring out the limitation of Wittgenstein's view that "a proposition is the expression of its truth-conditions" (*TLP* 4.431), Strawson points out that we cannot give a satisfactory account of the notion of truth-conditions "which involves no essential reference to communicative speech acts, i.e., to communication-intention." But in fairness to Strawson, one would be well-advised to note his cautious observation that the essential reference to communication-intention falls "into outlying portions of our semantic theory" and "remains secondary and derivative" and that "the central core of meaning (is) determined by the rules which determine truth-conditions." Without modification I find it difficult to accept Strawson's primary emphasis on the rule-determining truth-conditions, relegating speech acts, deliberate silence etc., to the secondary position.

Merleau-Ponty observes on the point: "The relations between the reader and the book are like those of loves in which one partner initially dominates because he was more proud or more temperamental, and then the situation changes and the other, more wise and more silent, rules". The silent conversation that goes on between the author and the reader in the reading situation is evidently non-picturesque, non-linear and modulative.

Silent conversation between the author and the reader and the loud discourse between the speaker and the hearer are not altogether different in principle. The difference is mainly practical. However, I do not like to belittle the importance of this difference. At the same time examples are available to indicate that the author-reader communication is more lively and effective than that between the utterer and the hearer. The practical life of a communicative situation, its strength, resonance or weakness have to be gathered from the insights, in-goings or interiority of the concerned situation. Its outer or exterior indicators, for example, name, place, persons and the syntax and semantics of the language used provide, at best, only a partial description of the related context and, at worst, substantially misleading boundary conditions. This is not to deny that proper names and indexical expressions, though context-sensitive, retain a part of their own meanings in themselves. Otherwise, i.e., if we refuse to recognise that words and expressions have somehow in themselves some meanings of their *own*, the talk of their adding, losing and changing meanings makes no sense. One

might say that this is a weak sort of essentialism built in the life of language and parts thereof. If we maintain that the parts of language, including referring expressions, have no meanings of their own, can hardly explain how language itself becomes a meaningfully related fabric having a life of its own, enabling us to live and communicate *by* or even *in* it.

In the context of communication when we use such words as *context* and *boundary* we must not take them in a rigid or well-demarcated sense. Words have their own life, growth, decay and death. This is, basically, because of their human roots and associations. Here I am not preaching the doctrine of some sort of linguistic holism which I have criticised elsewhere. What I mean is this. Language has a life of its own, and words, as parts of language, have also their own lives. The cells of an organism, one might say in a non-metaphorical sense, have their own (more or less autonomous) lives and yet they form parts of and make the life of the concerned organism itself possible. The macro-life of a language and the micro-lives of words are dialectically related, interfused and interactive.

In a somewhat comparable context, Gadamer has spoken of an "inner dimension" and "dialectic of words". "(E)very word breaks forth as if from a centre and is related to a whole, through which alone it is a word... (E)very word, in its momentariness, carries with it the unsaid, to which it is related by responding and indicating. The occasionality of human speech is not a casual imperfection of its expressive power; it is, rather, the logical expression of living virtuality of the speech, that brings the totality of the meaning into play, without being able to express it totally".³⁵ Language has a life of its own. That life becomes manifest and articulated clearly in speech. To put it from the reverse end, parts of speech derive their articulated meaning in and from unitary speech-acts-cum-speech-situations, and the latter, in turn, from the life of a somehow identifiable language. A word of caution. We must remember that silence is [in]-built in language. If language is a plenum, uninterrupted continuum, it is so under the aspect of meaningfulness and not definable in terms of words, however large might their number be and complex their syntax. The whole to which a word belongs contains in it meaningful slices of silence which interleave words but themselves are not words.

Obviously, this primitive or natural language knows not what we call *logical* types of levels in it. In the context of natural language, the word we intuitively use is *field* and not *type*. Rigid and well-defined type of language is, in a way, generative of paradoxes and antinomies. It also raises well-known difficulties for self-referring expressions. Language without logical or grammatical constants could have done away with the problems often ascribed to the theory of types. Against Russell, as we know, Wittgenstein held this view. The problems which could be dispensed with the knocking out of logical constants of proposition put additional burden on names and their nexus, i.e., proposition. How do names get themselves concatenated and succeed in *picturing* certain state of affairs? I have already indicated before that the power of naming of names is neither fixed not encircled by an un-

broken or unbreakable boundary. Therefore, to my mind, Wittgenstein's solution of the problem of logical grammatical constants will not do. We have to look for another solution. One might say: we are always working with another solution and now it is time that we become aware of its fuller implications.

We speak of observational terms and language, of theoretical terms and language, and of (well-defined) axiomatic terms and language. In between these three types of terms and language, if we so decide, we may think of other "hybrid" types of terms and language as well. Language-layers are never exhaustively enumerable. To think so is to assume a wrong notion of relation between life and language. But the point I want to emphasise here is that even this axiomatic language is *answerable* to theoretical language and the latter, in turn, to observational language. To put the matter from the other end, from the bottom of the pyramid, one might say that the observational terms and language must somehow be *capturable/catchable* in theoretical terms and language, and the latter, in turn, *capturable/catchable* in axiomatic terms and language. If the said answerable capturable/dialectics between the top and the bottom of the language-pyramid, (let us assume for the time being that it is a pyramid and not a field), does not work, the communication between the top and the bottom, between the axiomatic language and the ordinary language, becomes impossible. But it is our common knowledge that the contents of the cognitive domains which use axiomatic language are available also to the users of ordinary language. In other words, identical contents may be represented in different ways, with varying degrees of abstractness and concreteness. The last test of the correctness or truthfulness of different levels of representation is practice, practical experience and its attending satisfaction or lack thereof. Beyond the test of practice there is no other test, e.g., intuitive or exact correspondence, available to *human* experience. The failure of theoretical test is rendered intelligible in terms of practical experience. But the failure of practical experience is hardly intelligible in terms of anything other than what we call practice itself. There is no higher tribunal before which it is *answerable* and by which it is *capturable* or arrestable. A Kantian might intervene and say at this stage: this only shows the autonomy of practical reason, i.e., reason in relation to will and action.

In my own way, I would like to say, the endless expressive character of language has two basic dimensions. Firstly, it has its depth-nuances which are mostly exploited by poets and artists. It has also its abstract layers of expression, which are mainly used by mathematicians and other users of mathematical techniques. The first aspect of language may be called *vertical disclosedness*. The second aspect may be called *horizontal disclosedness*. We have already noticed that words have their *spread-out* character. They send out ripples and resonances all around them. The contexts of their use, their response and resistance, make considerable difference to the form and scope

of the ripples and resonances sent off by them. In other words, words have no fixed and rigid meaning of their own.

The vertical disclosedness of language is entirely related to the different levels of our experience. The different levels of our experiences seek expressions appropriate to their nature. What we have in us as aesthetic, ethical, or spiritual experiences often present themselves to us very intensely, poignantly and delicately. The intensity, poignancy, delicacy and other similar characteristics of these value-experiences we feel inclined to describe as ineffable, for they defy all expression. Mystics and poets affirm that in the ecstasy of contemplation, the contents of their experience get almost completely dissolved and that they are left with nothing in them to express in words. "You always stand alone beyond the stream of songs. The waves of my tunes wash your feet but I know not how to reach you (Tagore)". "In that high hour of visitation from living God thought was nought" (Wordsworth). Many of them prefer, in those moments of joy, silence to expression. In these modes of experience, language and life are so interwoven that the former fails to be reflective of the latter. At the reflective level language succeeds in varying degrees in disengaging itself from the experiences of life. In arts, spiritual experience, etc. language proves primarily self-addressed, i.e., soliloquous.

In its other aspect, horizontal disclosedness or spreadoutness, language becomes partially disengaged from the life with which it is necessarily and in various ways interwoven. At this stage, language gets *other*-oriented, and words get *other*-seeking and, therefore, the public or institutional character of language becomes very manifest. The horizontally disclosed language is for all to follow. But for obvious reasons, all cannot follow it equally. The mathematician and the poet can and, in fact, do operate at this, i.e., *other*-ward level of language. In one sense their aim is same, namely, to communicate. But in another sense, their aim is different. While the mathematician tries to *show* or *prove*, the poet tries to *lay bare* and *share* his experience with others. One might say: the paradigm of *horizontal* disclosed, i.e., public-institutional, language is proof. For, it is argued, proof is clear and distinct. But the critic may point out that this clarity and distinctness are parasitical and depend upon the acceptance of the grounds of proof—axioms, definitions, etc., which, as we know, are not answerable to anything beyond or above them. If the critic happens to be himself a poet, he may go further and affirm that compared to the clarity of mathematical proof, *transparency* of poetry or, for that matter, of music is preferable from the standpoint of successful communication. Further, the said transparency, unlike clarity of proof is not parasitical. It is unfounded, self-shining, and endlessly *improvable*.

NOTES AND REFERENCES

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SRI AUROBINDO AND KARL MARX

Integral Sociology & Dialectical Sociology

D. P. Chattopadhyaya

KARL MARX AND SRI AUROBINDO with whose ideas this book is mainly concerned, though belong to two different cultures and ages, the affinity of their chosen themes is very ~~intimate~~. Admittedly their methods are opposite. One is a dialectician and the other an integralist. Interestingly enough, some of their basic conclusions are similar. It is evident from their common commitment to holism, historicism and anarchism. And this originally induced the author of this work to make a comparative study of these two very unlike thinkers.

FREEDOM TRANSCENDENCE AND IDENTITY

Essays in memory of Kalidas Bhattacharyya .

Pradip Kumar Sengupta, Ed.

KALIDAS BHATTACHARYYA (1911-1984) belonged to that select band of Indian philosophers who did not remain content with the mere exposition of classical Indian thought systems. Grounded equally well in the intricacies of both Eastern and Western philosophical systems, he refused to harp on the superiority or inferiority of either. According to him, the essential nature of Indian philosophical quest lies in its concept of total man which finds expression in the unity of spirit and matter, in the grand idea of freedom, which is the realization of self-in-man through action.

LOGIC, LANGUAGE & REALITY

An introduction to Philosophical Studies

Bimal Krishna Matilal

THE WORD 'PHILOSOPHY' as well as the conjuring expression 'Indian philosophy' has meant different things to different people—endeavours and activities, old and new, grave and frivolous, edifying and banal, esoteric and exoteric. In this book, the author has chosen deliberately a very dominant trend of the classical (Sanskrit) philosophical literature as his subject of study. The age of the material used here demands both philological scholarship and philosophical amplification. Classical *pramāṇasāstras* usually deal with the theory of knowledge, the nature of inference and language, and the related questions of ontology and semantics. Several important concepts and theories have been singled out for critical analysis and clarification in modern terms so that the results may be intelligible to modern students of both Sanskrit and philosophy.